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A FURTHER STUDY OF TUBERCULOSIS OF BONE AND ITS EARLY OPERATIVE TREATMENT.

By Roswell Park, A. M., M. D.
Professor of Surgery, Med. Dep., Univ. of Buffalo.

[Read before the Buffalo Medical and Surgical Association.]

"Tuberculous affections of bone,—to certain physicians known almost from time to time immemorial, but altogether ignored by the great majority of them,—constitute a class of diseases for a description of which one may search in vain the systematic treatises on surgery. Hinted at rather than described under twenty different names, confounded for the most part with other alterations of bone, especially caries, they have long been the object of various theoretical explanations, in every age, while investigations have ever been made for the discovery of their essential characteristics."

With this paragraph opens the chapter on this topic in Nélaton's *Elements of Surgicat Pathology;* *as well as his original thesis,—Nélaton, to whom, more than to any other one man, we owe our present knowledge of this important matter. In its sentences I find, perhaps, sufficient excuse for my acceptance of the invitation to present to you some thoughts on this subject. Could I address myself to it with that fulness which it deserves, I should consume altogether too much of your valuable time. Nevertheless in some of its features it deserves discussion in any meeting where surgical topics come up for debate.

And one feature which must strike every one who studies the matter comprehensively is the peculiarity of national acceptance or disavowal of these views. Thus, on the European continent not a surgeon of any prominence but that holds to them and, more than this, makes them the basis of his work, which latter is successful just in proportion to his mastery of his pathology. On the other hand British surgeons, and the vast majority of American surgeons who have imitated them, have been so conservative that the text books in our vernacular are, perhaps, fifty years behind those of German and French writers of to-day, and their authors do not seem to have advanced even so far as had Nélaton when he published his memorable thesis, "*Recherches sur l'affection tuberculeuse des os*," in 1836. *Why* this is the case we cannot now stop to consider; nevertheless the fact seems conspicuous in the history of surgery. In the last edition of Erichsen there is a slight concession in this direction; in the third edition of Holmes' "System" there is an evident disagreement between the views of the editor and those of one or two of his writers. In the *International Encyclopædia* the only serviceable information to be gained is from the articles in the sixth volume, emanating from the Lyons school, which is notably in advance. To be sure, numerous British and American journal articles make the ideas of certain surgeons noteworthy by contrast, yet the position of a national profession is to be judged rather by its text-books, I take it, than by its special journals.

**Elements de Pathol. Chirurgicale*, *Par A*, *Nélaton*, *2me edit.*, II., *p. 71.* Paris: 1869.

Compare this apathy, when important pathological issues are at stake, with German and French activity. Not a month goes by without some important contribution to the subject; scarcely a number of the French, and not one of the German special surgical journals without some noteworthy paper; even the weekly journals teem with them. The discoveries of Koch and his followers have given a peculiar impetus to such studies, to be sure, yet one cannot long attend the continental clinics without firm conviction that the matter is not overestimated. How many American teachers have to-day any fixed notions on the subject? Of how many can we say that they have followed the lead of those four leaders in this direction, Volkmann, König, Ollier and Lannelongue, even enough to be able to expound their views? At what national meeting in Great Britain, or on this side of the ocean, has the topic ever come up for general consideration? Yet, at each congress of German or French surgeons, and at every similar meeting elsewhere on the other continent, there is no subject which occupies more time. This does not mean that they are daft upon the subject; but rather that we, in this country, are singularly behindhand.

Pardon me, then, if I speak, *con amore*, of that which I think has received unmerited neglect.

Frequency.—In the continental clinics, supplied from a populace overworked and under-fed, in centers where the population is crowded, and heredity plays a conspicuous rôle, it is not strange that the proportion of tuberculous cases entering the surgical wards is estimated, according to locality, at from 25% to 35% of the total number, nearly the same as the relative proportion of tuberculous medical cases. In the British hospitals, and among our own, I do not find the proportion nearly as large; and in this fact may be found the explanation of the lack of interest in the subject of which I have complained.

Yet in my own practice, which, outside of hospital work, is almost exclusively a consulting and operating one, I find that about twenty-five per cent. of the cases which I see, belong to the category of tuberculous surgical affections. Among these, universally, the most common are osseous lesions, among which, of course, I reckon such lesions as all forms of tumor albus, morbus coxæ, chronic caries and necrosis of non-syphilitic origin, spina ventosa, etc. I am well aware that the inclusion of all of these lesions under the heading of tuberculous may not be in consonance with old time views; yet I have the best of pathological and clinical authority for it, and furthermore the best of backing in the position taken.

And here it may be well to emphasize that all those manifestations of a diathesis known as "scrofulous" have been clearly shown to be essentially tuberculous in character; consequently, the sooner the term *scrofulous* is expunged from our vocabulary the more accurate will be our statements. Time fails to follow out the argument into which this statement might lead; I can only refer to the studies of Max Schüller, Krause, Colas and numerous others. If the term scrofulous *must* be used, let it be in an adjective sense to denote that diathesis, easily recognized, which predisposes so markedly to lesions that of themselves are notoriously tubercular. There are some pathological features in connection with the topic in hand which will, however, claim our attention in this place. Krause and Schuchardt and König and many others, have made microscopic examinations of pus and débris from lesions which, according to our forefathers, were reckoned among the scrofulous, but which now must be called only tuberculous. In the great majority of those cases they were able to recognize the presence of tubercle bacilli, though not in all. It is hardly fair to expect to find these bacilli in products of degeneration which have laid in the tissues for months and years, the sport of various vital chemical processes. When the lesions are reasonably new the bacilli are almost invariably found. Beyond this we have the evidence of almost countless inoculation experiments. So that with the pathological and the clinical proof, each corroborating the other, we may regard the evidence as amply sufficient to justify the conclusions drawn. To this it may be added that the only doubters are the non-workers, that class of critics, respectable only in point of number, who, never investigating for themselves, yet content themselves by discrediting the work of others. The scepticism of these men we may disregard.

I will not weary you with the results of my own microscopical work in this direction; but will simply say that for two years I systemically examined pus and débris from these cases whenever I could suitably collect it, and with results in thorough accord with those alluded to above. With this reasonable ground for my own convictions, and with other work to occupy my little spare time, I have of late neglected these examinations, not thinking it essential to continue them longer.

Following Charvot* we may say that in any inquiry concerning the tuberculous nature of given lesions the positive demands of pathological inquiry are satisfied by demonstration of:

(*a.*) The ordinary clinical features peculiar to such cases.

(*b.*) The conventional histological structure of tubercle: *i. e.*, the giant cell.

(*c.*) The presence of tubercle bacilli, as demonstrated by known methods.

(*d.*) Result of inoculation experiments.

(*e.*) Result of culture experiments.

**Revue de Chirurgie*, 1884.

And as I have elsewhere shown,* it may be held that compliance with any three of the above five postulates will be convincing proof of the tuberculous nature of any case or specimen. Such proof is not to be obtained by sitting in one's easy chair and scoffing, but by diligent work at the bedside and in the laboratory. In fact, unfortunately the surgeon too ofteen sees the inoculation experiment made upon the patient whom he would gladly cure, when as the result of insufficiently radical measures he sees some old tuberculous focus lighted up into fresh activity, or finds that general infection has followed an évidement and learns that an amputation should have been made instead. No more important lesson can be taught in this connection than the folly of half way measures in attacking tubercular foci; they must be let entirely alone or else mercilessly and radically extirpated.

No surprise is elicited when statistics are quoted showing the terrible frequency of tubercular thoracic and abdominal lesions; the average practitioner will lose three cases of phthisis in one family, and yet hesitate to consider as tuberculous a tumor albus or a lupus-like ulcer in another member of the same.

The tubercle germ is ubiquitous, and if we would inculcate clearer notions on this subject we must keep in mind that a bone swelling even though it follow an injury, or a joint swelling even though it succeed a sprain, or a glandular enlargement in the neck of a patient who has a catarrh or carious teeth or an otitis purulenta,—that either of these is just as likely to be of tubercular origin as are the cough of long duration accompanied by profuse expectoration and hectic, or the diarrhœa of the emaciated infant whose abdominal glands are enlarged. In other words, save perhaps the teeth, the nails and the hair, not a single part of the body is exempt from tuberculous invasion.

Beside this there are other facts of equal importance which deserve emphasis in this place, and to which I would accord all the dignity possible.

Tuberculous processes may be disseminated, or may be strictly localized.

When localized they are curable just in proportion as they are

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**Annals of Surgery:* I., 237. 1885.

accessible to the surgeon, and just in proportion as the surgeon deals radically with them.

According to that indefinite element in the individual make-up which some call predisposition, these local tubercular foci may display an innocence almost incapable of offence, or a malignancy only comparable with that of the most rapidly growing sarcomata and carcinomata. Why this is the case we do not know; we only realize it clinically. That Hueter accounted for it by congenital enlargement of lymph spaces, while Formad holds it to be the result of narrowing of the same, shows that we are yet wide of the truth. From the known fact that the tubercle bacilli do not thrive in the presence of abundant oxygen, the explanation may be found in the relative size and weight of the heart and lungs, which in children should be as 1 to 5-7, but which in distinctively *scrofulous* children is as 1 to 8-10. In other words a heart disproportionately small means sluggishness of circulation, oxygenation and nutrition, and these in their turn are conditions most acceptable to the bacilli.

In fact, I cannot place too much stress on this relation of weight of the thoracic viscera, for whose significance, in no small degree, we must thank the researches of Brehmer. (*Die Aetiologie der Chronischen Lungenschwindsucht:* Berlin. 1885.) He worked out the problem of their relative weights with most painstaking diligence, and in nearly every case of phthisis found the proportion between the weight of the heart and of the lungs largely widened. And in the so-called scrofulous children if this did not appear in early childhood it did at puberty, and was clinically evidenced by dyspnœa, functional derangement, disinclination for exercise, etc. It seems to me that in this anatomical condition may be found the explanation which so many have long sought for and overlooked.

Thus far I have detained you rather with general considerations which have seemed necessary to a study of tuberculosis of bone. It is now just fifty years since Nélaton published his remarkable thesis. That which Bayle and Lænnec did for the lungs he did for bone in general. His brochure is to-day as good authority—so far as it goes—as it was then; subsequent investigators not having to undo anything which he then did; while his clinical and microscopic descriptions have not since been excelled in accuracy or interest.

By this it is not meant that we have made no advance since his day; but only that what he then wrote has borne the test of time.

To-day our position is substantially this: Rheumatism, syphilis, rickets and malignant disease cause alterations in bone and its adnexa which usually bear unmistakable evidence of their nature, and which for the most part assume a chronic character. The most acute affections of bone are those connected with the manifestations of acute infectious osteomyelitis, or acute sepsis. Excluding the lesions resulting from these, everything heretofore known as caries, necrosis, spina ventosa, pædarthrocace, tumor albus, fungous synoritis, "scrofula" of bones and joints, Pott's disease, psoas abscess, morbus caxæ, etc.,—all of these belong in the category of tuberculous affections of bone. The importance of the subject and its wide range are abundantly illustrated in this comprehensive list.

Tuberculosis pulmonum is so common, and its *post mortem* findings so familiar to our eyes, that we insensibly make the appearance of the lung the ideal of our pathological picture of other parts similarily affected. To this I would raise no essential objection. Nélaton beautifully showed that the two types of tuberculosis of bone were the disseminated and the encysted. The same will hold good regarding the lung: we see in one spot a diffusion of the process by which the parenchyma is studded with miliary tubercules, and in another where a tubercular focus long encysted has broken down and the formation of a cavity has begun.

It is furthermore notorious that in connection with phthisical processes in the lungs, we have in one place condensation and sclerosis of tissue, in another rarefaction and atrophy. So in bone; it becomes in one place much thickened and condensed, even to the extent of eburnation, while in another we have the known appearances of rarefying ostitis. I have shown specimens beautifully illustrating this to men who could not bring themselves to an appreciation of the fact, who yet would have been among the first to call attention to it in the lung;—so great is the power of prejudice.

In fact, the resemblances between lung and bone, anatomically, pathologically and clinically, are too marked to be overlooked, and Mr. Savory did a great service for British pathology when he pointed out many of them. Both are eminently spongy; the parenchyma of one rudely resembles the cancelous tissue of the other. The pleura bears much the same relation to the lung that the periosteum and synovialis do to the bone; just as pleuritis is set up in phthisis so are periostitis and synovitis in tuberculous ostitis; effusion occurs in one case as in the other. Adhesions form in the plural cavity, and so they do in the joint; obliteration of internal veins causes the superficial veins to become prominent either over the phthisical chest or the tumor albus; a tubercular pluritis leads to an empyæma with all its disastrous consequences, while tubercular periostitis leads to a cold or congestion abscess; and tubercular synovitis leads to pyarthrosis, which we may well call empyæma of the joint, with fungous ulceration, etc. Our comparatively intimate knowledge of the disease in one place should therefore lead to our better acquaintance with it in another. One might find still further clinical resemblance in the tendency of tubercular processes to attack the extremity of the lung tissue, usually the apex, and the joint ends of bones—epiphyses. One may even institute comparisons by which pneumonia, as a given disease, is set opposite acute osteomyelitis, and idopathic pleurisy opposite idiopathic or traumatic periostitis. One remembers, too, the cases where a pneumonic consolidation is changed over into a caseous mass; in other words, where pneumonia is the precursor of acute or chronic miliary tuberculosis of the lungs; and no one can forget—who has ever seen such cases—where an acute septic or suppurative process in bone has led to that which later appears in all its details as a tuberculous caries and responds to all the tests necessary to clearly mark it as such.

In the light of all this, then, one need not oppose a study of phthisis pulmonalis as a basis for studying—let us say—*phthisis ossium.*

In the light of most recent researches, however, a problem comes up which cannot yet be considered as definitely settled; and that is the reciprocal relations of the suppurative and the tubercular processes as we frequently see them co-existent in bone. Which was the prior lesion is a question that at present baffles us, and perhaps always must do so without an accurate history of each case.

It is not difficult to understand that a focus of inflammation may have existed at some time in a certain bone, and that by natural or artificial means an apparent cure may have resulted. Yet no point in modern surgical pathology has been made clearer than that in such foci the germs of disease (staph. pyog. aureus) may lie quiescent in spore form for years, and finally, when the surrounding conditions become favorable—as they may after wasting fevers or after injury—break out into renewed activity and growth; loss of a limb not infrequently resulting therefrom, and even loss of life. Now this clinical fact just related bears this relation to bone tuberculosis, that in the pus from these cases both pyogenic bacteria and tubercle bacilli are to be demonstrated. Whether, then, the bacilli were the inciters of the fresh destruction, or the cocci of suppuration—must be decided, so far as we can at present arrive at decision, by the circumstances of the case. At all events the caries, which such trouble almost inevitably leads to, is not distinguishable from other tubercular caries.

Just how far a joint inflammation which was not originally tuberculous may become so is a matter not yet fully decided. According to Volkmann we at present only know that this may happen in rare cases of fibrinous synovitis with possible formation of rice-bodies, and in chronic hydrarthroses with hyperplastic proliferation of fat villi.

Among the young in 90 or 95 per cent. of cases of tubercular joint trouble the affection will be found to have had its origin in the epiphysis of a neighboring long bone; in adults this proportion is not quite so large; or, to put it in other words, primary tuberculosis of the synorialis is very rare in children, not so rare in adults, though still the exception. In children we may have tuberculosis of the diaphysis as well as of the epiphysis; in adults almost never. Chronic ostitis or periostitis of the shafts of long bones, among adults, is usually to be referred to such causes as syphilis and osteomyelitis.

Treatment.—Setting aside—for lack of time—other considerations of equal importance with those touched upon, we have now to concern ourselves with the one final question of how to treat these cases. First of all we must ever keep in mind that spontaneous recovery, even of severe cases, is possible. We know of cases of undoubted pulmonary tuberculosis which have recovered; and I have frequently made the remark that if the lungs were as accessible as the bones we could often cure consumption. Indeed I should not be surprised if some venturesome spirit should ere long propose the resection of one pulmonary lobe for the cure of a localized phthisical process.

That bone tuberculosis is capable of recovery we are taught by numerous cases of hip disease and other tubercular joint diseases in the hands of the orthopædic and general surgeons. We might, indeed, profitably devote more than one hour to the elucidation, if possible, of the conditions which determine cure in these cases. Probably when summed up they would be found to obtain in—

1. Physiological rest of affected parts.
2. Restoration of the circulatory equilibrium.
3. Improved general nutrition.
4. Improved aëration, *i. e.*, oxygenation.

While nature's iatric tendencies are thus beautifully displayed in many cases, there are yet others where—as already mentioned—the tendency seems to be vicious from the start, where there is striking disposition to recedive, where the general direction of the morbid process is to dissemination which can only be compared with general sarcomatosis or carcinomatosis. These cases are found too often among patients who dislike milk and animal foods, and who cannot be induced to take cod liver oil. Whether the disrelish of this class for food be the cause or the effect of the disease is yet problematical, neverthelesss it a conspicuous characteristic. In these cases the less the surgeon operates probably the fewer disappointments he will meet with. Drugs and all medication seem useless, and such patients are as surely doomed as if they had cancer. Their doom is sometimes sealed by steady encroachment, sometimes by a speedy dissemination which can only be called fulminating. Some extremely sad illustrations of this latter fact have impressed it profoundly upon my own mind. Thus I had lately occasion to care for a little boy who had morbus caxæ in the second stage. After a siege of confinement to bed with traction upon the limb, I got him up in a Taylor brace, and upon crutches, and was on the point of relieving him of these locomotive aids when a slight indiscretion led to an acute tuberculous spondylitis, and this to a tuberculous cerebral and spinal meningitis, all of which scarcely covered three weeks before death relieved him of his sufferings. He had been removed to a distance before this final trouble, and his case had been considered typhoid until I saw him and recognized its terrible nature.

Unless I unduly overestimate it no more trying question comes before the surgeon, than in some of these cases, *when* to operate and *what* to do. Concerning what to do, a general agreement has been reached among surgeons that the only safe measures—in the interest of the patient—are the radical.

Volkmann has indicated these latter when about a joint so well that we may adopt his dicta without hesitation. In the order of the severity they are:

Incision (double if possible) and drainage, with or without curretting the joint. (*Arthrotomy.*)

Total extirpation of the joint capsule, the articulation having been freely opened as for exsection, with retention of the bony epiphysis and joint cartilages. (*Arthrectomia synovialis.*)

Resection of the joint with painstaking extirpation of the entire capsule. The resection may be complete or atypical. (*Arthrectomia ossalis et synovialis.*)

If, for example, the hip is to be resected, simple decapitation of the femur is not enough; the capsule must be dissected out, and the acetabulum reamed out; if the disease has penetrated the pelvis the surgeon must also follow it there. Concerning those conditions which determine success or failure in these cases, I would particularly commend to you a clinical lecture by Prof. Trélat which has just appeared.* He begins with the general statement that absolute and complete success is not common, and that failure is not rare. In accounting for this, as well as in estimating the probabilities in a given case, he lays great stress on what he happily terms the '*bilan*' of the patient; that is, the balance-sheet of his health. This must be closely examined, and constitutes for him an indispensable preliminary, since the influence of the general condition upon the result of the operation and the healing process is very great.

**Conditions de succès, et causes d' insuccès dans les opérations sur les tuberculeux. Progrès Médical.* 1886. Nos. 26 and 29.

Operative efforts fail because of:
Local recedive.
General dissemination.
Incompleteness of same.

Undoubtedly, as far as our own manipulations are concerned, we fail often because we hesitate—from misguided motives of sentiment—to go so far as the disease has gone; because when we are in doubt concerning certain tissue we give it the benefit of the doubt, instead of removing it unsparingly. It is worse for the patient to ineffectually attack a focus of tuberculous disease than to leave it alone; there must be no half-way measures. In attacking it we open up numerous absorbents which are only too ready to take up any of the infectious material which we may leave. The old dread of operating upon rectal fistulæ in phthisical patients furnishes clinical proof of this, since the fistula being a tubercular sinus an incision makes infection easy; especially when, as formerly, the surgeon contented himself with mere incision and neglected to scrape out the fistulous track, or, better still, to dissect it entirely out. And how often, yielding either to the wishes of the patient or to our own timidity, do we attack a carious tarsus and find later that we have to amputate the leg at the point of election, or resect a knee and wish afterward that we had amputated above it.

Concerning recedives we may say that they are either purely local or occur in other parts or organs. And they will occur in spite of all reasonable precaution. While one may regret it, one need never be surprised if a second or third operation be called for. Of some cases it may be said that it is expecting altogether too much of them to expect cure by a single operation. At other times application of the actual cautery, as recommended by Ollier, or even of zinc chloride, seems to be sufficient to check the tendency to tuberculous granulations. Nevertheless, as Trélat says, these are among the unpleasant surprises in surgery, though analagous unpleasant changes occur to those especially who have to deal with cancers and diseases of the urinary organs.

What we can do, then, to prevent recedive is, first, to be thorough in operating, and then to build up the patient in every possible way. Trélat closes with these words:

"You will then keep in mind that the pursuit (detection) of these lesions during operation will require all your attention, all your sagacity and all your perseverance; that after operation you must be constantly on guard against reactions, and give minutest attention to the dressings and incessant care to the wound. Success in surgery is always the result of attention to detail and of taking extreme precaution, and this aphorism is above all things true when one deals with the tuberculous. You will not forget the advantage of tonic measures and of physical and mental hygiene. Lastly, you will not lose sight of the value—in all external tuberculous affections—of saline medication either at the sea-shore or at the various baths, and will not omit to make due use of every suitable adjunct to treatment."

Finally, I wish to invite your attention to a therapeutic measure which is sometimes palliative, sometimes actually curative; which as yet has been but little used by American surgeons, and which, it seems to me, offers too many advantages to be neglected. It is widely known abroad as *Ignipuncture*. Two years ago I published a paper devoted to the treatment of tuberculous affections by the actual cautery, with a report of some cases. I would be glad here to record a still wider experience with it and to try to further commend it to your favor.

"Richet was among the first to make the cautery actually penetrate to the bone-marrow. His observations, which were never published in full, are best known to us through a brochure pertaining to the subject published by Julliard in 1874.* Julliard himself strongly recommends it, and devised a special galvano-cautery point for the purpose. Kocher, to whose casuistic I owe my first knowledge of the subject (*l. c.*), began its use independently of Richet's work, in 1872, perhaps even preceding him, and devised his own forms of cautery irons. Lücke began with the thermo-cautery, and this is the instrument now in use, so far as I know, wherever ignipuncture is practised.

In general terms we may hold that ignipuncture is indicated in all cases of chronic ostitis where fluctuation and sinuses or other indications of points of softening and breaking down do not call for the curette or chisel; and in many cases even after removal of products of softening the cautery can still be used to advantage to stimulate surrounding bone into a normal activity. Its application may be *intraosteal* or *intracapsular.*†

If the former, the glowing platinum is either plunged through the skin and soft tissue right down to the bone and into its substance, or else an incision is made through a part or the whole of the soft parts, since it is not so much disturbance of these latter which is primarily aimed at. Antiseptic precautions and dressings are of course indicated, and if the incision has been a large one it may be partially closed, but ample opportunity must be given for drainage so long as may be necessary. The bone exposed to intense heat is burnt into a crust; around this takes place an active inflammation which leads first to an osteo-porosis, and later to an osteo-sclerosis, which means virtual recovery. As I have already tried to show how often a primary bone lesion leads to a serious joint complication, it will be seen that the intraosteal ignipuncture may have a most important prophylactic effect as against the same; in fact, my own experience has taught me its value in this respect.

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* *Bulletin de la Société Méd. de la Suisse Romande*, 1874.
† *Deutsche Chirurgie*, Lfg. 19, 1880, p. 231.

Intracapsular ignipuncture may be made either with or without previously opening the joint. If the joint is supposed to be in a fungous condition it should certainly be opened and cleaned out, but if it seems to be merely a lesion in a bone-end lying so close to the joint surface that it can only be approached by going through the joint, then no hesitation need be felt in burning right through the capsule and its cavity into the bone; only being doubly careful about the antiseptic precautions. Lücke does not hesitate to lay the joint freely open. If the joint surface is healthy and only bone is diseased, joint reaction is unlikely to occur. This measure is also said to be serviceable in chronic rheumatic and other forms of synovitis, though I have had no personal experience with it in such cases."‡

So much for a description of the operation. For its performance I have always given an anæsthetic, though Kocher seldom resorts to it. A claim that this is a cure-all, if made, could never be established. The statement which I do desire to make for it, however, is that I have by its use cured some cases, and have materially improved others, though a cure was not always obtained. These latter in almost every instance have belonged to the class I have already spoken of where the disease seemed to manifest an almost malignant tendency and where nothing short of a mutilating operation—which parents refused to permit—could have eradicated the disease.

In one respect I have never known it it to fail, viz., for the relief of those nocturnal osteocopic or starting pains which are so significant of the affections under consideration. Time and again I have resorted to ignipuncture solely for the abatement of this disease, with a feeling of perfect satisfaction if this were accomplished, though nothing like a final cure were attained. And if I have ever had a regret after resorting to it, it has only been because I did not practise it more thoroughly. I know of no danger connected with its proper use, and should not hesitate to practise ignipuncture at any time when indicated.

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‡ *Vid.* paper by the author "On Tuberculosis of Bones and Joints and its Treatment by Ignipuncture." *Philadelphia Medical News*, August 30, 1886.

Concerning its rationale we are perhaps not yet in position to speak from positive knowledge. Undoubtedly it substitutes a new and exceedingly active process for an old and slow one. Doubtless in many cases tension is relieved, and exit given for various discharges. But beside these it would seem reasonable to hold to the theory of some specific action on the living germs of tubercular diseases. It is known that they develop slowly and finally die when supplied with abundance of oxygen. Increased oxygen supply must come with increased flow of arterial blood, and I can conceive of no measure more calculated to lead to vivid hyperæmia than this application of the actual cautery. Possibly this may not be the real result of its undeniably beneficial action, but it seems reasonable to so regard it.

In my former paper on this same subject I mentioned that Kirkpatrick, of Dublin, had practised a species of bone drainage in morbus coxæ by perforating the trochanter and freely applying potassa cum calce in such a way that it should eat a channel into the bone. At a recent meeting of the Irish Academy of Medicine, March 19, Mr. Stokes read a paper on bone drainage in the early treatment of hip disease in which he reported cases successfully treated on this same general plan. Prof. Stoker followed with a paper on the same subject, in which he advocated the employment of the trephine, perforating the trochanter with it. Mr. Croly recalled some of Kirkpatrick's cases and the immediate relief of pain which the application of the caustic secured. Mr. Franks, more than any of the other speakers, seemed to realize the tuberculous nature of these cases and the value of some such operative attack, and he, also, spoke in favor of the use of the cautery. (*Dublin Medical Journal*, August, 1886, p. 144.) While there was such unanimity of opinion as to the value of operative interference, I cannot help feeling that not one of the speakers recognized the full therapeutic and anodyne effect of ignipuncture.

But probably no one has resorted to ignipuncture so often as Kolomnin, of St. Petersburg, who at the first congress of Russian physicians, in December, 1885, reported (*Centrlblt. f. Chir.*, 1886, No. 28, p. 483) ninety-two cases where he had practised it alone, and fifty-seven where he had combined it with the use of the trephine. According to his experience the indications for its use were: 1. Circulatory disturbances in bone which lead to venous stasis. 2. Intraosteal pressure. It seemed to him peculiarly adapted for these cases on account of (1) the trifling inflammatory disturbances which follow, and (2) the short length of time during which immobilization is required, thereby lessening the tendency to fatty osteoporosis. He had the best results in the most recent cases, and better in children than in adults. He thinks it well to first trephine the neck of the femur and the head of the humerus before ignipuncturing. Of his one hundred and fifty-three patients not one died, and his results were most favorable.

I had had it in mind to terminate this paper with a relation of cases, with a view to making clearer by their report the benefits and advantages of ignipuncture. But I have feared that their details might not interest, particularly as I have already summarized my experience with the method, and I have therefore determined to omit all case reports, trusting that I have already said enough in its favor to make it appear in favorable light. I conclude, therefore, with a claim for priority in its use in this country, believing that I am the first American surgeon to systematically practise it in suitable cases, and formally recommend it to others.

A CERTAIN doctor was called to see a woman in the middle walks of life, she being in the third month of pregnancy, and determined to have an abortion produced. The doctor, after listening to his patient's pleadings for some time, asked her to give her reason. The reply was—"Look at this child!" She was holding on her lap a little girl, aged twelve months,—not old enough to wean. "I can not take care of two." "Well," said the doctor, "then you want to get rid of one of them, do you?" "Yes," said the woman, in a low voice, dropping her head. "All right," said the doctor, with considerable firmness; and he picked up a hatchet lying near by and quietly raised it as if to brain the little girl. The woman screamed frantically, and caught the hatchet, saying in a wild and frantic voice: "Doctor, what in the name of heaven are you going to do—murder my darling?" "Yes," said the sage old doctor, "you said you wanted one of them killed." "Yes, yes, doctor, but not this one." "But, my dear woman, I prefer to kill this one, for in the other instance I would endanger your life, probably kill you, and thereby become a double murderer."—*Exchange.*

THE PRINCIPLES OF ASEPTIC SURGERY ILLUSTRATED BY A SURGICAL OPERATION.

BY WILLIAM B. DAVIS.
Captain and Ass't Surgeon U. S. Army.

[Read before the Buffalo Medical and Surgical Association, Nov. 2, 1886.]

Mr. President and Gentlemen—In selecting "A Surgical Operation" as the title of the paper for this evening, it is my purpose to discuss the *aseptic* management of a wound made by the surgeon; and I take it that the subject can be presented more clearly by recording a recent case, than by dealing solely with abstract principles.

It will be convenient and practical to treat:

First—Of the preliminary precautions, which may be subdivided into the remote and the immediate (*neither* of which, of course, are peculiar to the aseptic methods).

Second—Of the precautions to be employed during the operation, and which *are* peculiar to the method under consideration.

Third—The dressings and after-treatment, which also pertain *exclusively* to the aseptic method.

I recently removed a fatty tumor—lipoma—from the left lumbar region of an officer of the garrison. The growth was about the size of a small cocoanut, and weighed a fraction over two (2) pounds when removed.

Remote Preliminary Precautions.—Two days before the date set for the operation the urine was carefully tested for albumen, but with a negative result. Had albumen been found, I would not have operated as long as a trace of it remained; for, as first pointed out and emphasized by Sir James Paget, so trifling an operation as the removal of a small cyst from the scalp has been followed by fatal erysipelas in a patient who had *unsuspected* albuminuria. Of course cases occur in which immediate operative procedures are imperatively demanded, as their present condition would inevitably cause a rapidly fatal result if not relieved, and the albuminuric state could do no more; but when time is allowed, it is the part of prudence to attend to this matter. "Inquire into the present physical condition—constitutional peculiarities (hemorrhagic diathesis, etc.), and previous habits (as to intemperance, etc.), *before* performing even the simplest operation."[*]

Immediate Preliminary Precautions.—At 8 o'clock on the morning of the operation (which took place at 1.30 P. M.), the patient was permitted to have a cup of coffee, and *nothing* else; nor was anything more in the way of food allowed to be taken into the stomach until 7 P. M.; by this means all tendency to nausea and vomiting, both during and after the operation, can be avoided.[†] I have seen it stated that by causing a patient who is recovering from ether narcosis to keep his eyes closed for a few hours, the tendency to nausea can be avoided; it being claimed that the patient being giddy, any object he may look at appears to sway from side to side, and has the effect upon him similar to that caused by the rocking of a ship, but—having every reason to be satified with the method first mentioned—I have taken no pains to ascertain whether the latter has any practical value.

At 12 M., or an hour and a half before the operation, fifteen (15) minims of the tincture of digitalis in one teaspoonful of water, was given *per orem*, to counteract any tendency to a flagging heart when under the anæsthetic. This is especially of service when chloroform is to be used, but I am in the habit of giving it as as matter of routine (when not specially contraindicated), preferring to be on the safe side. At 1 P. M. a hypodermic[‡] injection was given containing five minims of Magendie's solution of Morphia (=gr.$\frac{1}{6}$), and one one-hundred-and-twentieth ($\frac{1}{120}$) of a grain of the sulphate of atropia.

The object of this injection was three-fold:

I. It lessens emotional excitement and dread of the operation.

II. The value of atropia as a stimulant to the respiratory centers, is well known.

III. Anæsthesia is much more rapidly produced, and a smaller quantity of the anæsthetic required.

For very severe and prolonged operations, the quantity of atropia mentioned above, may be advantageously increased. It is essential that the injection be given at least twenty minutes prior to the beginning of the administration of the anæsthetic, else its protective power is not experienced.

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[*] "Sanitary Conditions in Surgery." J. L. Cabell, M. D.
[†] Dr. Wm. M. Thallon, Brooklyn, N. Y.
[‡] Dr. J. C. Reeve, Dayton, O.

Preparation of Instruments, etc.—The surgeon should carefully go over, in his own mind, all the steps of the proposed operation, and in doing so the instruments that he will certainly need, and those which he may possibly need, will suggest themselves to him. It is my habit to do this several days before each operation of which I have had notice, and to jot down the different things that will be needed, as they occur to me, and to keep the memorandum so that additions to the list can be made at any time. Upon the morning of the operation, I tally off each article by the list I have prepared. All instruments, needles, protective and drainage tubes should be immersed in a 1-30 carbolic solution, *at least an hour* before they are needed. The instruments should be thoroughly cleaned before and after each operation; and Morton, of Philadelphia, advises that—in addition to being thoroughly cleaned—they should be boiled for some time before being put in the carbolic solution.

While upon the subject of instruments, I will describe a little contrivance* devised by myself some years ago, as I have never seen it in the hands of other surgeons, nor in the shops, nor have I seen any substitute for it.

It consists essentially of a steel rod between three and five inches long, and about the size of a lead-pencil, with a knob-like head of wood at one end, and about three-quarters of an inch from the other end (which terminates in a screw-point) the diameter of the rod is reduced so as to form a shoulder against which rests a disk of metal, slightly smaller than a silver half-dime; a piece of fine cork, cut into a pyriform shape is screwed on until its apex presses firmly against the disk just mentioned, and its base projects a quarter of an inch, more or less, beyond the screw point.

This instrument should be placed in the 1-30 carbolic solution along with the others. It comes into play when the sutures are being introduced. An assistant makes counter-pressure with the cork-covered extremity at the point where the needle will emerge, either in the wound, or on the integuments.

*** Made by Henry Herrmann, No. 9 W. Huron St., Buffalo, N. Y.**

By this means the needle can be pushed rapidly through, with no danger of injuring its point (for it enters the cork); and in addition, the dragging apart of the edges of the wound, which we have all noticed and deplored, as the needle is passed from within outwards—especially in relaxed, or, on the other hand, pathologically thickened tissues—can be avoided. The cork, of course, can be changed as often as is desired. When a safety-pin is to be employed to secure the drainage-tube, it is essential that (after being carefully worked) it be immersed in pure* carbolic acid for a few moments, before being put in the 1-30 carbolic solution.

En passant, the following extract from a most readable and instructive work,† will be of interest. "Until quite recently, it was supposed that instruments were rendered aseptic by being anointed with carbolized oil, but Koch has demonstrated beyond all question that solutions of carbolic acid in *oil*, or in *alcohol*, are absolutely inert in respect to any destructive action on bacteric life, either on the spores, or the fully developed organisms. As an example, it was found that anthrax spores introduced into *oily solutions* of carbolic acid, thymol, or salicylic acid, were still capable of development at the end of three months. Koch says that though in the tissues of the body, where there is water, the oily solution would give up part of the acid to the tissues and produce an antiseptic effect, that in all cases where *dry* substances, such as silk, catgut instruments, etc., have carbolized oil applied to them, *not the least antiseptic* effect is to be expected, even upon the most vulnerable micro-organisms."

Two irrigators (fountain syringes) were filled with bichloride of mercury solution—the larger one, of three quarts capacity, with 1-2000, and the smaller holding one quart, with 1-5000, and hung conveniently to the operating-table, and several feet above it.

Precautions During the Operation.—The patient was placed upon the table, and the integument over and in the neighborhood of the tumor was carefully shaved; then scrubbed with a nail-brush, first using soap and water, and then 1-1000 sublimate solution.

All being in readiness, the anæsthetic (ether) was given, and while that was being done, my hands were carefully purified by scrubbing them with soap and water, and then with the sublimate solution (1-1000), using the nail-brush for the hands and paying especial attention to the nails. Towels wrung out in 1-2000 sublimate solution were laid over the parts surrounding the proposed line of incision and on the table near the patient, in order that the hands, instruments, and everything required about the operation, after removal from the carbolic solution and when momentarily not in use, would lie upon a sterilized surface. By the side of the operating table, a basin was placed containing several quarts of a 1-1000 (sublimate) solution, into which the hands of the operator could be plunged from time to time, should he accidentally have touched any unprepared substance.

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* Dr. Robert T. Morris, N. Y.

† Treatment of Wounds. L. S. Pilcher, M. D.

An incision, ten inches in length, was then made over the convexity of the tumor—parallel with the crest of the ilium and about an inch above—and rapidly deepened until the growth was reached; and at the same time the nozzle of the irrigator, containing the 1-2000 sublimate solution, was made to play upon the towel lying on the patient's body just above the wound, in such a manner that a thin stream of the solution ran continuously over the incision, and this was kept up until the tumor was entirely removed.

The hemorrhage was trifling, no vessels being severed which required more than the temporary application of the hæmostatic forceps—a little instrument, by the way, which, in my opinion, has robbed surgery of half its terrors.

The growth having been removed, the deep cavity left was irrigated with the 1-2000 solution, and that in turn was flushed out with the 1-5000, to avoid all danger of the stronger solution being left in sufficient quantity to do harm. A rubber drainage-tube was then taken from the carbolic solution, and introduced into the bottom of the wound, and the ends brought out at the upper and lower angles.

Cheyne advises that when the lower angle of the wound is too near sources of putrefaction—such as the pubic region and the perinæum—the tube should be brought out at the angle furthest removed from said source; and experience has shown that it is not essential that the orifice (of the tube) should be dependent, though it is better that it should be. Cheyne also advises that in a large wound it is well to have *two small* drainage-tubes rather than *one large* one, because a few days after the operation one of these tubes may be removed altogether; whereas, if a large one is taken out to insert a smaller, the greatest difficulty might be encountered in getting it in.

Dressings and After-Treatment.—The wound was then closed with interrupted catgut sutures at short intervals (fresh from the bottle containing 95% alcohol in which the reel was immersed)—small carbolized safety-pins passed through the projecting ends of the drainage-tube, which were cut off obliquely, just leaving room for the safety pins. Iodoform was dusted thickly along the line of the wound and over the mouths of the drainage-tube. A strip of protective (taken from this 1-30 carbolic solution) applied, a small hole being torn opposite the ends of the drainage-tube—then more iodoform was put on. Next, six or eight thicknesses of sublimated gauze (extending well beyond the protective on every side)—then a mass of absorbent cotton upon which iodoform was freely sprinkled; and finally the whole was covered in by a piece of rubber tissue, and antiseptic gauze bandages completed the dressing.

Patient rested well from the anæsthetic, and, owing to the precautions taken, there was no subsequent nausea.

The morning after the operation, the axillary temperature was normal, and that afternoon 99.8°; the second morning it was normal, and that afternoon 99.6°; and *thereafter* both morning and evening, it was absolutely normal.

Diet restricted for the first two days only. Wound dressed first time on the fifth day, same precautions as before (as to asepsis) being employed; it was found to have healed by first intention throughout, except at the openings for the drainage-tube. The tube was shortened one-half and the dressing reapplied.

On the ninth day the wound was uncovered for the second time (with same precautions as hitherto); the external portion of the catgut sutures brushed off, and the drainage-tube entirely withdrawn. A few shreds of absorbent cotton were then laid lengthwise along the line of the wound, now represented by a faint pink line, and flexible collodion painted over them, in order to give the new tissue a certain amount of support, it being desired to dispense with the bandages, owing to the weather being quite warm. The openings left by the drainage-tube were dressed as simple ulcers, and the dressing recovered by (flexible) collodion. From that time the patient attended to all his duties, and was finally "returned to duty" a few days later. Not one drop of pus was secreted from the beginning to the end of the treatment.

To a man imbued with antiseptic ideas, and who has seen and done aseptic work, the following extract from the fourth edition of Ashhurst's Principles and Practise of Surgery (just issued), where, speaking of the dressing of an amputation stump, he says, "The stump should not be disturbed for forty-eight or seventy-two hours, by which time *suppuration* will usually have begun," is strange reading, and savors of the days of the *tinder-box and the flint-lock musket.*

DISLOCATIONS FORWARDS OF THE HEAD OF THE RADIUS.

BY RICHARD M. MOORE, M. D.
Rochester, N. Y.

[Read before the Medical Association of Central New York, Nov. 16, 1886.]

In the last edition of the late Dr. Frank H. Hamilton's work on Fractures and Dislocations (page 751), he says, speaking of dislocations of the radial head forwards: "Poinsot, in a note to the French edition of this treatise, has seen fit to recognize these partial dislocations forwards or backwards, when occasioned in childhood by lifting the body by the arms, as a distinct variety of radial dislocations, or, as he designates them, dislocations of the head of the radius downwards (by elongation). The grounds upon which he bases these distinctions are ingenious and specious, but they do not seem to me satisfactory."

Dr. Hamilton, further, in the January number of the *New York Medical Journal* of 1885, publishes in full the note above referred to, and again reiterates his disbelief in the correctness of Poinsot's reasoning. Investigation into the subject so fully confirms the latter that I may be pardoned in quoting largely from what he has written upon the subject. He says: "This displacement, peculiar to childhood, and which results from violent traction having been made upon the forearm, has been described by Malgaine, Denucé and most surgical authors when speaking of the dislocations forward or backward, as being a partial variety of one of these. For several reasons, however, it has seemed to us preferable to devote to it a separate paragraph. These dislocations in children differ absolutely from the partial dislocations in the adult; the former are entirely of a benign character, and their reduction is often spontaneous; the latter, on the contrary, are apt to be irreducible, or they always necessitate certain efforts for reduction. In the first case, after the displacement is once reduced, the child is apt to use the arm as well as before, and no precaution is needed to prevent the dislocation from being reproduced; in the second case it is often very difficult to keep the parts in place, and the patient is always obliged to wear an apparatus for a certain length of time. These reasons seem to us amply sufficient to justify the classification which we have adopted."

To one reading what I have here quoted with an unbiased mind, it would seem perfectly palpable that there was a marked and unmistakable difference in the mechanism of these two varieties of dislocations.

The supposed mechanism of this injury has varied almost with every writer that has touched upon the subject. It has been ascribed to the stretching of the ligaments of the elbow-joint, to the hooking of the bicipital tuberosity under the external border of the ulna, the interposition of the fibres of the supinator brevis between the two bones, epiphyseal separation of the head of the radius, subluxation of the interarticular cartilage of the wrist upon the lower extremity of the ulna, and finally, by Hamilton himself, to "temporary injury done the musculo-spiral nerve."

None of these various explanations have been verified by dissection nor produced upon the cadaver, and it was not until Pingaud, a French surgeon, upon whose experiments Poinsot bases his opinions, and which investigation fully confirms, that the true nature of this dislocation was demonstrated. Our experiments were identical with his as were also our conclusions, and were as follows:

The arm of a child a few months old, was firmly seized by a vise near the upper end of the humerus, the skin and muscles having been previously dissected away from the ligaments and capsule of the elbow-joint, then extension was made upon the forearm at the same time that it was strongly pronated. The radial head was seen to separate from the condyle of the humerus about one-eighth of an inch, the capsule stretching tense and allowing from its thinness the separation to be seen. Suddenly the capsule became collapsed as if driven in by atmospheric pressure; at the same time a slight snap was communicated to the experimenter's hand that was used to make extension. On inspection the orbicular or annular ligament which normally embraces what is known as the neck of the radius immediately below the head, was seen to have slipped over the rim in front, and was lying between the head and the condyle of the humerus and held firmly in place by the tightened anterior ligament and capsule. Upon flexing the forearm on the area the anterior ligament and capsule relaxed, and by one or two quick rotations of the forearm the orbicular ligament snapped back into its place below the head. This was repeated over and over again, always with the same result, and at no time with any tearing or rupture of the capsule or ligaments.

That this is peculiarly a dislocation of childhood, the relations between the size and shape of the radial head and neck of a child and that of the adult, would clearly indicate. In the adult, and even in early adolescence the head is broad and saucerlike, with a well-defined and narrow neck which the ligament fits snugly so that it would be almost if not quite impossible for such an accident to happen. In the infant, and in early childhood, the head is but little, if any, larger than the neck, it being the base of a very obtuse cone, up the sides and over the end of which the orbicular ligament slips with a readiness that is surprising When dislocated the ligament overrides only the anterior portion of the rim; so that after it is relaxed by flexing the forearm, rotating the head on the bone in a manner screws it into its normal place again.

From what I have already said, the treatment of these cases is evident. The child's arm should be flexed, slight extension with one or two quick rotary movements is all that is sufficient, the subdued snap is felt rather than heard, and reduction is completed. Almost immediately the child raises its hand and goes to play as if nothing had been the matter.

TEA AND COFFEE.

By J. W. PUTNAM, M. D.
Buffalo, N. Y.

[Read before The Buffalo Physicians' Club.]

Civilized man in all climes seems to demand some artificial stimulant, *i. e.*, some external means of temporarily increasing the energy and bodily heat. This demand in the temperate zone is universally met by the use of tea and coffee.

If this be true, that every patient, man or woman, we are called upon to treat, uses to a greater or less extent these two substances, it behooves us, if we would thoroughly appreciate all the influences to which our patient is subjected, to study their physiological and therapeutical effect. For I believe that the difference between the successful and unsuccessful management of a case depends largely on the attention to, or neglect of the little things which enter into the daily habit and surroundings of the patient.

The questions frequently asked me, "Can I take coffee?" "Will tea hurt me?", and my inability to satisfy myself that my sometimes dictatorial prohibition of tea and coffee was not from a scientific basis but from prejudice, led me to a more careful study of the medical authorities.

Green and black tea are not, as popularly supposed, the product of different plants, but result from different treatment of the leaves. The leaves intended for green tea are roasted and dried within an hour after picking. Black tea, on the contrary, has been allowed a previous process of fermentation before drying. The quantitative analyses of tea vary somewhat. That of Mulder is quoted by Pereira in 1843 and by Pavy in 1881 as the most correct. This shows green tea to contain 17% of tannin, while black tea has but 12%, a volatile oil ½%–¾% and a crystallizable alkaline nitrogenous substance called theine ½% in both green and black teas.

Tea is prepared for a beverage by infusion. The effect of taking daily doses of tannin and theine has been variously estimated by medical men. Schwann discovered that tannin will throw down a precipitate from artificial digestive fluids and renders them inert. The question then forcibly presents itself, Will the free use of strong tea containing 17% of tannin taken after a meal act in a similar manner on the natural digestive fluids? In other words may not some of our cases of dyspepsia be due to a too frequent use of tea which lessens peptic power?

The effect of tea upon the nervous and vascular system has been noted by many careful observers. When taken as a beverage, especially by those unaccustomed to it, a marked exhileration is produced, wakefulness to a great degree and an ease and power for study and mental action.

The effect on the vascular system is that of a sedative. Pereira believes this depends on the volatile oil, and says: "This influence is analogous in some respects to that of foxglove, for both green tea and foxglove occasion watchfulness, and act as sedatives on the heart and blood vessels." Pavy says: "Tea exerts a restorative and exhilerating action without stimulating or inebriating."

Nervous agitation, muscular tremors, a sense of prostration and palpitation are effects that have been produced by drinking large quantities of strong tea. This much had been observed before tea assumed its present therapeutic importance.

A few years ago a new drug was introduced to the profession—caffeine. This is the alkaloid derived from coffee and is identical with the alkaloid, theine derived from tea. This has been experimented with by physiologists and therapeutists of note, Dujardin-Beaumetz, Jaccoud, Gubler, Fothergill, Thomas J. Mays and our own investigator, Dr. J. B. Andrews. These men have found caffeine a great tonic and a diuretic. Jaccoud in Paris in 1866 first used caffeine in disease of the heart and in renal disease with albuminuria. Breckinridge, who has experimented more than any other man living with citrate of caffeine, has given it extraordinary merit as a diuretic. Every day experience has taught us its anti-soporific power. We have, then, a drug to be studied in reference to the heart, kidneys and the nervous system.

In the *Ephemeris* for July, 1884, Dr. Squibb relates the history of a man sixty-five years old not habituated to the use of tea, coffee or tobacco, who was overcome with drowsiness every evening at half past eight o'clock. Nothing less than a three-grain dose of Merck's caffeine would avail. This kept him awake till ten o'clock.

As to the action on the heart there is still great, diversity of opinion, which may be arranged in three groups:

First—Some claim it accelerates the heart beat.

Second—Some that it retards it.

Third—It has no action.

Fothergill reconciles these contradictions by the fact that the therapeutic dose is followed by an effect directly opposite to the effect of a tonic dose. Thus moderate doses of gr. iii. diminish the pulsation and increase the vascular tension, *i. e.*, they act as a cardiac tonic. In larger doses it produces toxic effects, accelerating the action of the heart and causing it to become irregular. Mays thus summarises: "The physiological action of caffeine is most clearly perceived in the circulating organs, lungs and kidneys. It slows the action of the heart and intensifies its valvular sounds, increases the size of the pulse waves, raises blood pressure and accelerates respiration. In larger doses it causes dyspnœa, diuresis, local spasm, tension in the neck, restlessness, ringing in the ears and dizziness without loss of consciousness." Dr. Squibb has prepared a fluid extract of tea known as fluid extract of camellia, 70 minims of which represent three grains of caffeine. It was with this extract that Dr. Andrews experimented. Six trials were made upon himself.

Exp. 1.—The pulse fell 8 beats in thirty minutes after a dose of 70 minims.

Exp. 2.—Took 80 minims at 9.15; in fifteen minutes pulse fell from 80 to 70 and increased in volume and force.

He gave a patient ʒii three times a day and the pulse fell from 116 to 90 per minute with increase of volume and force.

In a case of nervous hysterical condition the same dose was given as a heart tonic with marked effect. A patient with feeble circulation was given the extract for two months with relief of all his symptoms by the increase of the force of the heart. Dr. Andrews noted no diuretic effects from fluid extract camellia, which he thinks is due to the fact that he did not use doses representing eight grains of caffeine three times daily. He closes by saying: "We have proved, I believe, beyond question that in caffeine we have found a most valuable heart tonic, rivalling in certain cases digitalis, convallaria and nitro-glycerine."

We have thus far spoken of tea or its extractives, caffeine, volatile oil and tannin.

All that has been said of caffeine applies equally to coffee. A fluid extract has been made, but as 120 minims equal in effect 70 minims of fluid extract of camellia, I doubt if it will ever take the place of the latter. Coffee is not so astringent as tea and contains but five per cent. of caffeo-tannic acid. Pavy, indeed, asserts that it sometimes causes diarrhœa. As a beverage it is more certain to stimulate and produce wakefulness than tea. Like the famed kola nut it has the property of sustaining the vital forces and allaying hunger. It is stated by Julius Lehman that dis-assimilation is retarded; while William Roberts says that it has but a slight inhibitory power on salivary digestion.

Bocker places coffee in the list of false aliments; that is, it may keep up life but does not repair tissues. He advises its use in wasting diseases as it retards destructive metamorphosis because of its effect on the nervous system. He has aptly called it the incentive of the rich and the consolation of the poor. This action of coffee has led different physicians to use it for various nervous and spasmodic affections. To a few of them I will call your attention:

In the *London Medical Journal* of 1849, Dr. Guyot, led by the statements that it had been employed as a febrifuge in intermittents, as a stomachic in dyspepsia, as a stimulant to the cerebro-spinal system in some nervous disorders, and by the fact that Percival and Laenner had used it successfully in spasmodic asthma, reports the following case: " A child aged four years, while under rigid dietetic treatment for measles, was seized with congestion of the lungs. A severe fit of coughing terminating in vomiting came on and all nourishment immediately ejected. In these circumstances, with death apparently impending, a teaspoonful of coffee was given and followed by a teaspoonful of beef tea. Not only was there no vomiting but the cough stopped. Two hours later the child took a little hashed cutlet with coffee—no vomiting, no cough. On the third day the coffee was discontinued. The cough returned with the characteristic violence of well-formed whooping-cough, and continued all day. Next day the coffee treatment was resumed and the cough disappeared." This led to its successful use in sixty cases, and here his record ends. Why the treatment has not been generally adopted, those who explain the reason for fashion in medicine must account for. Possibly because the remedy was too simple.

In 1857 Durand, of Havana, reported the use of coffee in a case of strangulated hernia for the reduction of which ice and taxis had been tried in vain, and an operation decided upon. As an experiment coffee infusion of the strength of ʒv to each cup was tried. A cupful every fifteen minutes was given. After the fifth cup gurgling was heard, at the ninth the tumor returned of itself. No application was made to the tumor. Since the publication of this case numerous other cases have been treated successfully.

I have given in detail these two characteristic cases, as they illustrate better than any I have seen elsewhere the powerful effect coffee has in allaying reflex irritability and muscular spasm. In my own practice I can testify to its successful use in the vomiting of migraine and in spasmodic coughs.

Thus far we have considered tea and coffee and their extractive principles as therapeutic agents. Let us return for a moment to their use as aliments.

Prof. Samuel Jackson, in a report of the Committee on Hygiene of the American Medical Association in 1848, speaking of the inordinate use of coffee, says: "These individuals suffer from a variety of vague symptoms characterizing no definite disease. They are always complaining, ailing, suffering, but not absolutely sick." As a result of his investigations among the industrial and laboring classes, he found that "the neuroses, neuralgias, and the various visceralgias were quite as common among them as among the luxurious and idle."

These statements were corroborated by large numbers of medical practitioners; also the statement that the greatest sufferers from these disordered states were the excessive consumers of tea and coffee. I believe that this is still true and that the false feeling that hunger is appeased by the breakfast coffee unaided by more than a roll explains this fact.

I have to-day a patient under treatment for feeling of lassitude, headache and troubled and uneasy sleep. This is a brief review of her habit of life. For breakfast she takes two cups of coffee and some bread and butter; carries with her a luncheon, goes to school, teaches morning and afternoon, and returns home to a hearty dinner which she cannot enjoy owing to a headache. Does any one doubt that the buoyant feeling in the morning is imparted by the strong nerve stimulant, coffee? That this has deceived her into believing that her breakfast was "hearty enough," as she told me in answer to a question. Thus it is not the use of coffee itself that is dangerous, but the tendency that follows to neglect the heartier diet. The patient improved by the addition of meat or eggs to her morning meal.

Against the practice of giving tea and coffee to children we cannot speak too strongly. Childhood is the period when the nervous activity is at its greatest. The brain is ever busy in receiving new impressions. Reflex action, co-ordination of muscles, and the special senses are all under a constant course of training. The nervous system is pushed to its utmost capacity and long is the list of victims that follow its over-stimulation. In these little people nothing but harm can come from the use of such cerebral stimulants as tea and coffee. Bad, then, as this practice is, let us as physicians be aggressive in its prohibition. Do not be satisfied by answering No, when asked as to its use, but let us educate the families with whom we come in contact that such practice is evil. I speak emphatically, because not only among the poor and uneducated, but among the rich who should know better, this practice is marvelously prevalent.

As a resumé of the action of tea and coffee, I tabulate:

First—They retard digestion.

Second—They retard destructive metamorphosis.

Third—They are cerebral stimulants.

Fourth—They are tonics.

Fifth—They are not food.

Sixth—Coffee is a diuretic.

Seventh—It is an anti-spasmodic.

With these premises it is easy for each to draw his own conclusions; and bearing them in mind, their prohibition or their use can be advised as special cases may demand.

THE POWER OF WILL ILLUSTRATED BY A CASE.

BY GEORGE F. COTT, M. D.
Norwalk, Ohio.

In the study of human nature, it must necessarily occur to us that one class of men can exercise considerable power or influence over another class; or, one individual can control himself, his habits, etc., much easier than another under like conditions and circumstances. Imaginary or functional diseases are often combatted in this way. If a man be strong-minded, that is, has a requisite amount of governing stability, he certainly forms his own path through life according to his ambition. Every accomplishment is the result of perseverance, determination, or the will. Heroic deeds are, generally, the result of deliberate determination. Men of determined character are often quoted as possessing an iron will. Cowardice is unknown in the strong-minded.

To illustrate very persistent will-power I will cite an instance. Medical literature abounds with cases of shortening after fracture of the shaft of the femur, and, no doubt, in nine-tenths of the cases the attending physician gets the blame for the very undesirable result. Many physicians who have had more or less success in the treatment of fractures claim that they never have any noticeable shortening. Be that as it may, that it does exist we see every day, and in such cases it becomes our plain duty to correct, in a measure, the deformity. That excellent authority, Professor Frank H. Hamilton, says, in his work on surgery, page 294:

"Now, in consideration of these facts, it behooves the physician to devise some plan to overcome the lameness necessitated by the shortening. In cases of extreme shortening, two or three inches, it will be difficult for a man to navigate without a cane or crutch; even a thick wooden sole applied to the foot of the short limb would not overcome the defect, as it is more or less clumsy and makes walking difficult."

In lieu of these facts we must look elsewhere for redress; as it is certainly desirable to do away with all the different appliances and make the patient as useful as before the injury. To show how easily this can be accomplished by a few years' perseverance in exercising the will-power I will relate the following case: T. S., aged 19, fell and fractured shaft of left femur; after recovery found shortening of one and one-half inches. At 24 he again fell from a height of forty-five feet, fracturing the left femur above the condyles, also shaft of radius and ulna, acromion process of scapula, dislocating the humerus, and breaking three ribs; was confined to bed twelve months. Shortening of left lower extremity this time three inches. At 28 fell from a height of twenty feet, fracturing right clavicle and shaft of left humerus. At 31 a stone, weighing 500 pounds, fell on his left leg, fracturing shaft of tibia and inner maleolus. This poor fellow may be considered "all broke up." He made a good recovery each time, leaving a slight deformity of left scapula and three inches shortening of left leg. Locomotion was extremely difficult, he having tried all the different appliances, but to no avail; and what was more, he was unable to procure employment. After two years of misery, caused chiefly by his inability to provide for himself, he hit upon the idea that possibly, by continued practice, he could manage to hide the deformity. Being a man of very determined nature he began walking without a cane, bringing both feet on a level; this, of course, caused the right shoulder to be considerably higher than the left; not despairing, however, he finally, after two years, accomplished his object of walking apparently straight by bringing the pelvis in an oblique position. He got such complete control of the muscles that his most intimate friends could not detect the deception. I examined him for Life Insurance lately, and after getting the history, removed his clothes, and then for the first time noticed the marked curvature of the spine to compensate for the pelvic obliquity. Although I had known the man several months, and walked with him, I never noticed anything unusual in his gait. When he brings the pelvis in its natural position, which he can do very readily, the curvature is obliterated, and then only can one notice the shortening. Since he has so artfully covered the deformity he has had steady employment at $3 a day as a stone-cutter. He does not experience the least inconvenience in locomotion.

Taking this case for an example, I verily believe, with proper instruction, such extreme shortening can often be made less conspicuous, and the patient better fitted for the ordinary routine of work. It ought to be impressed upon him of what little use he is to himself limping through life, when it requires but a few years, perseverance to overcome the defect.

I hope, in conclusion, that some physician will try the experiment, as the patient will surely derive some benefit thereby, even though the doctor will not reap a harvest financially. Some of our time must be gratuitously devoted to suffering humanity; for one poor man made happy and comfortable is worth a half dozen rich men in misery.

As a long article savors of monotony I will give another interesting chapter of this man's career later.

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VOLUME TWO.

With this number Volume II. opens more auspiciously than many ardent friends of the new enterprise had dared to hope it could. It seems to us that THE MEDICAL PRESS OF WESTERN NEW YORK has proved a success beyond a doubt. Concerning the future we do not care to say much, save that no effort shall be spared to preserve the high standard thus far maintained; if this has not been difficult in the past it will now be easy.

Concerning the past, we can point with pride to every promise redeemed; to a volume containing fourteen issues, with a considerable number of pages beyond those promised; to a journal generally allowed by our exchanges to be the handsomest in the country; to a goodly and ever increasing *bona fide* subscription list; to an extensive advertising patronage; in other words, to a journal which has needed no apology, and which has called forth only compliment.

To the stockholders of the enterprise we would say that their money has been judiciously and economically expended, always to advantage, and with the unusually rapid return of making it a business success. To those who doubted, at its inception, whether enough original matter could be had to fairly supply it, we would say that there has not been a month when there were not enough original papers for two or three months ahead. If these gentlemen will take pains to compare our pages with those of some of our contemporaries, they will find in ours nearly or more than double the number of original titles which others have been able to present. We have not filled our pages with selections and abstracts, preferring to present the work and talents of our own State.

It has been pleasant to see that our exchanges have, without exception, had a kind word for us; and from the manner in which some of them have appropriated our items, often without credit, we perceive that our pages have been widely perused. For their words of commendation they will please receive our grateful acknowledgment; for their failure to give credit we cannot refrain from the admonishment that honesty is, all things considered, the best policy.

We purpose making one addition to the literary attractions of the PRESS. Unless crowded out by original contributions we purpose giving in the editorial pages of each issue a short historical sketch, either of some eminent physician or naturalist of the past or present, or of some epoch or event memorable in the annals of medicine. Too little attention is paid, in these busy days, to the archives of our craft and many men of wide abilities need to be reminded of the men who and events which have put us where we now stand.

Finally, we wish to remind our subscribers that a live journal is not to be conducted without money, and that if they really wish us well they will show it *by paying up their subscriptions promptly, not by checks on country banks, but by postal or other orders upon which we do not have to pay a commission for cash.*

JOHN P. GRAY, A. M., LL. D.

We are pained to announce the death of Dr. John P. Gray, so long and favorably known as superintendent of the State Lunatic Asylum at Utica. This occurred after a final illness of about two weeks, from Bright's disease, on the 29th of November last.

Dr. Gray was born in 1825 at Half Moon, Center Co., Pa. He received his collegiate education at Dickinson College, was graduated in medicine from the University of Pennsylvania in the same class as Professor Rochester of Buffalo, and subsequently took service in the Blockley Hospital. In 1850 he entered upon duty as the third assistant physician in the Utica Asylum, where he was rapidly promoted through the successive grades of second and first assistant, and in July, 1854, at the early age of twenty-nine years, he was appointed the superintendent of the institution. Since this time, a period of more than thirty-two years, he has been identified with its history and the controlling mind in the lunacy affairs of the State.

Soon after assuming charge of the asylum he became the editor-in-chief of the *American Journal of Insanity*, the first, and for some years the only journal in the world devoted to insanity and allied subjects. Under his charge it gained an enviable position both in this country and abroad, and has done more than any other agency to advance American psychiatry and to elevate the care and treatment of the insane in the United States. The journal, however, but reflected the life of its editor and was the record of his labor.

When he entered upon duty at the asylum the noisy and maniacal patients were continuously secluded in their cells; all liberty of action was restricted within the walls surrounding them. They were cared for as only the most vicious and dangerous of the criminal class. Controlled by the courage of his convictions of what could be done for their better care and comfort, he assumed the responsibility, and personally superintended their removal. He gave them freedom of action in the long halls, brought them together at the table, replaced the bunks, filled only with straw, with furniture and bedding, and transformed their condition and surroundings to something of the present state. This was a logical sequence of the view he adopted and maintained that insanity is a physical disease; that the insane are sick people and demand the care of a hospital.

Thus early in his career he became a pioneer in the advance made in the treatment and care of the insane, and during his long and eventful service he kept the institution in the van of progress and made it the acknowledged leader in methods of administration, a center from which radiated an influence felt for good throughout the land. Under his charge the Utica asylum became a school of instruction, which has furnished a larger number of men equipped for service in the specialty than any other in the country.

It was not in this field alone that his power was felt. Following the example of his renowned predecessor, Dr. Amariah Brigham, he soon gained the highest position in medical jurisprudence. His aid was invoked both in criminal and civil suits when the question of mental condition was involved. He was a witness in the most important cases which have been tried in the State, and his opinions always carried the greatest weight with the judiciary, with juries, and with the people. The citizens of Buffalo do not fail to recall the Gaffney case, which alone was sufficient to establish his reputation as an accomplished expert in insanity. No man ever gained and retained so universally the confidence of both the legal and medical profession, in the correctness of his opinion as to mental states, as did Dr. Gray. The responsibility placed upon him by the most arduous and trying duty of giving testimony in cases involving not only large pecuniary interests, but the lives of his fellowmen, had a telling influence in bringing about his final decline and death at a time when, by ripened judgment and vast experience, he was prepared to do the most effective work of his life. The trial of Guiteau, in which he carried the burden of the prosecution, and the subsequent injury from the attempted assassination, were strong elements in producing the final result.

As a teacher, Dr. Gray achieved an enviable success. He occupied for some years and up to the time of his death the chair of Psychological Medicine and Medical Jurisprudence in the Bellevue Hospital and Albany Medical Colleges. His broad knowledge, his intimate acquaintance with the subject, his strong memory, his unsurpassed power to convey to others his own views, his firm convictions, his readiness and even eloquence in the use of language, all combined to make him successful as an instructor. His heart was in this work, and the labor incident to it was to him but a pleasing recreation. His lectures attracted not only the students of his own college, but crowded the room wlth those from other schools and with physicians in active practice. He never failed to instruct nor to arouse an interest in the subject in all who heard him.

Few men have been more honored with titles and positions. He was made an LL. D., by Hamilton College; was elected an honorary member of the Psychological Societies of Great Britain, of France and of Italy. He was the president of the Association of Medical Superintendents of American Institutions for the Insane, of the New

York State Medical Association, and held many other positions of honor and preferment.

Dr. Gray was a man of large frame and large heart, full of kindness and sympathy. He was readily touched by the sufferings of others, and was as gentle in his ministrations as a woman. He was domestic in his tastes, a loving husband and an indulgent father. For children he always had the kind words and pleasant ways which attracted their attention and called forth their affection. In conversation he was brilliant and instructive, as his extensive travels and associations with all conditions of men furnished opportunity for acquiring knowledge which his retentive memory enabled him to appropriate and use to the gratification of his listeners. Few came into his presence without being impressed with his power. He was a natural leader of men and would have reached the highest position in any walk of life he might have chosen.

Among his most notable characteristics was his readiness to appreciate, and ability to state in a clear and forcible manner the fundamental principles of any question, his calm and independent judgment and strong convictions. These qualities, combined with an indomitable will, fully explained his influence over others and were the elements of his success. Having satisfied himself of the justness and correctness of his views or conduct, he was indifferent to carping criticism and could not thereby be forced into controversy; but if attacked upon charges reflecting upon his official action, he never failed to defend himself successfully. To do right and let the consequences take care of themselves were the maxim which he often repeated and which governed his conduct.

Dr. Gray was a member of the Reformed Church, with which he united many years ago. In his religious views there were the same clear, decided convictions which marked his whole life.

In these few words we have endeavored to portray the man, not to eulogize him. To those who knew him he needs no eulogy. To his friends he was bound by ties stronger than words can express, and to all of them his death is an event full of sorrow and sadness.

A great man has fallen. J. B. A.

THE NEW SUPERINTENDENT OF THE STATE LUNATIC ASYLUM AT UTICA, NEW YORK.

At their annual meeting held on Tuesday, December 14th, the Board of Managers unanimously elected Dr. G. Alder Blumer to succeed Dr. Gray as Superintendent of the Asylum.

Dr. Blumer is a young man of about thirty-five years of age, the son of a physician and was born at Sunderland, Durham, England. He received his education at the Moravian College, at Neuweid, on the Rhine, at the Lyceé Imperial, Rouen, France, and at the University of Durham. After coming to this country he took the degree of M. D. at the University of Pennsylvania in 1879, and subsequently held the position of resident physician at the German Hospital in Philadelphia, until he came to the asylum at Utica to fill the vacancy made by the resignation of Dr. J. B. Andrews, on his assuming the position of Superintendent of the Buffalo State Asylum.

As a special preparation for the duties of the place he is to occupy, he has the advantages of six years' experience in the asylum under Dr. Gray, and during his absence, of being acting superintendent of the institution. The position is one of great responsibility and peculiar difficulty, as he is called to succeed Dr Gray, who for a third of a century conducted the asylum so successfully and impressed it so fully with his own personality.

We wish him the most gratifying success and look to see the Utica Asylum kept fully in the line of progress which it has always held.

THE PRACTICE OF MEDICINE IN THE TEMPLES OF ANCIENT GREECE.

The mythical god of medicine among the Greeks was Esculapius, for whom Socrates, in his last request to his friends, begged that they should slay a cock as a sacrificial offering. The Asclepiadæ, his reputed descendants, were those who ministered as priests in the temples consecrated to his worship. The first of these temples was erected in the Peleponnesus fifty years after the Trojan war, whence the worship of the god rapidly spread till it was observed throughout Greece, Italy, Asia and Africa. The Asclepiadæ formed a caste, like the priests of Egypt, governed by sacred laws, one of which said that "it is not permitted to reveal sacred things except unto the elect, and strangers must be admitted to this knowledge only after having submitted to the tests of initiation."

This showed the extent to which they had preserved the traditions and customs of the Indo-Egyptian school, which restricted instruction to members of the same caste and to strangers duly initiated. Later, when the followers of Pythagoras began to publicly discuss of morals and physics, when itinerant physicians were listened to with reverence and the teachers of the gymnasia were taken into public confidence, the priests of Esculapius could no longer preserve silence, and they were thus compelled by competition to divulge their secrets. Thus liberated from the fantastic concealment of the sanctuary the science of medicine had its birth; and was now publicly taught and divested of many of its mystic rites. The priests of Cnidus were first to accept the situation, and they published a collection of health aphorisms known as the Cnidian Sentences. The Asclepiadæ of Cos, the birth-place of Hippocrates, quickly followed, and gave forth a series of treatises which far exceeded in importance any previous collection and which began the era often called the Hippocratic.

But to return to the priests and the temples. Down to the time of Hippocrates the Asclepiadæ developed a taste for observation and rendered genuine service to the science of their day. But from that time down to the Christian era most of them, seeing their former secrets no longer the property of a few but a part of the general fund of knowledge, abandoned the field of legitimate medicine of their day, and gave themselves up to imposing on the credulity of their victims and practising the grossest trickery and charlatanry. Thus the secrets of the temple became those of the conjurer's den.

The temples, however, remained unchanged. These were erected always in some imposing locality, sometimes on the salubrious hill-top, sometimes alongside the thermal or mineral spring. They were surrounded by groves and the grounds were always made attractive. Hither, on pilgrimages, came the sick from all directions; actuated usually by that profound faith which is so large an element in many cures. Diversions were numerous, the air was wholesome, the regimen was simple, exercise was encouraged, plentiful ablution was recommended; indeed, these were the "summer-resorts" of that ancient period, and nature's methods were then as now sufficient for many invalids. To be sure, venesection, purgatives, emetics, frictions, baths, etc., were not lacking, and were prescribed sometimes without stint. The imagination was carefully directed and controlled. The oracle was not to be consulted till the faith was duly aroused; sacrifices, fasting, long prayers, were encouraged.

Finally, the god might be interrogated, often only after long days and nights spent in the temple. Sometimes he spoke in mysterious ways; sometimes he even appeared under the form of a serpent, devouring the cakes on the altar; at other times he caused dreams, which were kindly interpreted by his priests. It was in some respects an ancient faith-cure. Those who recovered failed not to publish their good fortune; those who still suffered considered that they had lacked not only in faith but works, and redoubled both their zeal and their offerings. Thus good results advertised the temple and bad ones enriched the priests, who desired less the glory of the god than the profit of his ministers.

That all this jugglery was not entirely masked may be gathered from the account of a night in the temple, which Aristophanes puts into the mouth of a character in one of his comedies. "The priests of the temple of Esculapius, after having extinguished all the lights, told us to go to sleep, adding that if any one should hear a hissing, which indicated the arrival of a god, he should not move in the slightest manner. So we all lay down without making any noise; but I could not sleep because of the odor of an excellent broth which an old woman held near me. Desiring most ardently to slide along to it I raised my head very quietly and saw the sacristan, who took away the cakes and figs from off the sacred tables, going the round of the altars, putting into his sack everything he could find. I believed I had a right to follow his example, so I raised up to go to the old woman's pot."

* * *

It gives great pleasure to be able to welcome back to his editorial desk Prof. J. S. Jewell, of Chicago, who has assumed the responsibilities of a new journal in his special department, and who has issued now four numbers of *The Neurological Review*. Those who know its learned editor and appreciate his encyclopædic erudition will look, not in vain, in its pages for contributions to neurology which shall prove of inestimable value. In fact, as we glance over its contents we realize that it must be recognized as an indispensable journal for all who give attention to nervous and mental diseases, and at the same time an ornament to American literature.

* * *

The past month has been one of conferences between private citizens and doctors. The Supervisors of Erie County are discussing the best means of establishing medical boards at the Alms-House and the Penitentiary, a movement to this effect having been made by some of the local profession. It is to be most sincerely hoped that, if appointed, these boards will be deprived of every political feature, and made subservient only to the best medical interests of all concerned.

As Buffalo is quite likely to have a new city charter, the composition of the Board of Health has been made the subject of several amicable discussions between some of those interested. At date of writing nothing definite had been decided upon. This, too, should be, so far as possible, removed from the domain of politics.

* * *

The many friends of Dr. J. B. Andrews, Superintendent of the Buffalo State Asylum for the Insane, will unite in congratulating him upon the honor of being made President of the Section of Psychological Medicine and Nervous Diseases of the Ninth International Congress, *vice* Dr. Gray deceased. That the doctor has highly deserved the honor on account of sevices rendered both to the public and to the profession all cordially admit; yet it is by no means always that the place and the man are so eminently suited to each other as in this instance.

* * *

At the next meeting of the State Society in Albany, a paper by Sir Spencer Wells, on "Cremation," will be read.

Society Proceedings.

McKEAN COUNTY MEDICAL SOCIETY.

Reported by J. R. McCarthy, M. D., Sec'y.

The Society met at Bradford, October 5, the President, Dr. Dorn, in the chair.

The Censors reported favorably on the applications of Dr. Thos. L. Kane of Kane, and Dr. Young of Eldred. They were then balloted for and regularly elected members of this Society.

The election of officers was then in order, and resulted as follows: President, Dr. C. D. Buss; Vice-President, Dr. George E. Benninghoff; Secretary and Treasurer, Dr. John R. McCarthy; Censors, three years, Dr. W. P. Shoemaker; two years, Dr. H. A. Canfield.

The Secretary was directed to communicate with Dr. Mann, of Buffalo, in reference to reading a paper at our next meeting.

Dr. McCarthy read a paper on "Lacerations of the Cervix Uteri," with special reference to its prevention.

In discussion Dr. Straight said, that lacerations of the cervix were almost always lateral. It is difficult to tell when to operate. It is not so much the amount of rupture that makes the operation necessary, as it is the difficulties that it produces. We should be controlled by the condition of the patient when we operate, for it is never safe as long as there is considerable inflammation. It is not safe to operate unless the uterus can be drawn down.

Dr. Shoemaker said, that if no other good came from our discussions, the fact that we learn to express ourselves the same and use the same terms would be a benefit to ourselves and to the community. People would understand us better, and would not think we differed in opinion when we fully agreed. He hoped he would never hear the term ulceration again, for an erosion, and was pleased that the essayist had been emphatic on that point. Numbers of us would call an erosion an ulceration when we knew better, and ought to be ashamed of ourselves. We would often call it an ulceration, simply because the patient was familiar with the term, and would not understand us if we called it an erosion; or, perhaps some one else had called it an ulceration, and we did not wish to appear to disagree. He was much interested in the paper. He considered that the reason why lateral lacerations were more frequent was because, in dilating, the sides of the cervix became thinner than the lips. In operating he felt that we should be controlled altogether, or mostly, by the symptoms, rather than by the extent of the rupture.

Emmet has so strongly set forth that this cicatricial tissue leads to many, if not most of the disorders; that the troubles start from this point, particularly the neuroses. From what he had seen, he was satisfied on this point, and felt that Emmet was fully justified in insisting that all the cicatricial should be removed.

Society Meeting, Nov. 2, 1886.

The President, Dr. Buss, in the chair.

Dr. M. D. Mann, of Buffalo, was then introduced and delivered an address on "Axis-traction Obstetrical Forceps." Obstetrical forceps, he said, have been in use from a very early date, and they have been of great use; but there have always been many difficulties in their employment. There have been but few eminent obstetricians who have not had modifiations of their own, which goes to show that no form is as yet perfect. Delivery by the long forceps when the head is in the superior straight is always delicate and more or less dangerous. As the art advanced, axis traction attracted the attention of the best minds. At first forceps were made straight, but it was found that they could not be used in the superior straight. To overcome this difficulty the pelvic curve was adopted, which enabled them to reach higher and overcome the difficulty of their slipping off the back of the child's head. In doing this, however, they added a difficulty, for on pulling with the handles, we pulled at an angle and forced the child's head against the symphysis pubis of the mother, instead of using force in line of the axis of the pelvis, thus wasting a great deal of force, not only to the detriment of the child, but also bruising the parts of the mother. With these forceps we could not do otherwise, for in attempting to use traction in a line parallel with the axis of the superior straight, the handles came in contact with the cocyx, long before they were brought back far enough. The question now was, how to solve the problem. It was desired to retain the pelvic curve, and at the same time accomplish axis traction. There were three methods tried: First—It was attempted to accomplish the desired result by changing the method of making traction on the handles. They must be grasped near the blades, with the palm of the hand downwards, the other hand seized the end of the handles, and held them firmly, while the hand near the blades would press down. This meets the indication as far as the axis is concerned, but it requires such an outlay of strength that it generally proves impracticable. The second class tried to modify the handles by attaching a lever to them that projected downwards, so that by taking hold of the end of the lever traction would be in line with the axis. This proved impracticable, for the reason, the handles would be forced up when traction would be made, so that the effect on the position of the blades was pernicious. The third class attached an apparatus to the blades for traction, that could be used independently of the handles. To this class belongs the Tarnier forceps. Reigle attached a thong to the blades, and with it made traction directly downwards. The additional mechanism for making axis traction was first brought out by Hermann, in 1844, who lived before his time, for he could not get any one interested in them, although he used them successfully himself. The forceps were afterwards laid away in the museum and forgotten. Tarnier re-invented, and was the first to introduce these forceps successfully, and they have taken his name. To the forceps two movable traction rods are attached, to the lower curvature of the blades, having a curve that corresponds to the lower border of the shanks, and which when not in use, are affixed to projecting pegs, so that even for ordinary use of the forceps, they would not be in the way. In using the forceps, they are introduced in the usual way, then the traction rods are detached at their lower ends and inserted into a socket-joint, to a strong steel bar that has a downward curve, the end of which is furnished with a transverse handle. The curve in this bar prevents it from pressing against the pereneum, in bringing the handle down. In addition to this, there is a set-screw crossways in the handles of the forceps, to adjust them and hold them together. These forceps draw exactly in line of the pelvic axis. Traction is to the center of the head, and the handles act as an automatic indicator, to guide in the direction traction should be made. The joints in the traction-rods are such that it is impossible to make the pernicious racking motion that many make with the ordinary forceps. In using the forceps, apply them as you would an ordinary pair of forceps, then lock the handles with the set-screw and take hold of and adjust the traction handle and take this hold without even touching the forceps' handles; then bring the traction handle down in line with the axis of the superior straight. As the head advances, the forcep's handles will rise up, indicating the change of the axis, and as they rise up, follow with the traction handles, keeping at a distance below of about one inch. Too much force should not be used. It must be remembered that now there is no strength thrown away, and it will be easier to do damage, in the way of rupturing the soft parts of the mother. He wished to caution against the abuse of these forceps, that not only no damage would be done, but that their use would be the more appreciated. It has been their abuse in the hands of those that has not used discretion, that has made them enemies; but when they are properly used, he did not see what reasonable objection could be made to them. They are only adapted to a limited number of cases, and these are to the superior straight, but when they are needed they are badly needed, and nothing else would adequately take their place. It may be objected to them that they are expensive, and few can afford to have so expensive a pair of extra forceps, when it would be very seldom that they would be needed; but modified as they are now, to the Simpson forceps, there is no need of any other than these, for by detaching the traction rods they can be used as ordinary forceps, and even when they are used, after the head has passed the superior straight, the traction-bar can be detached, and then they can be used as an ordinary pair of forceps, during the balance of the delivery. It has been objected to them that with the set-screw too much compression would be used, or that the continual compression would prove injurious. Now this is really not the case; and when properly considered, it will be found that the opposite is the fact. With the ordinary forceps, the greater the amount of traction the greater the compression. With these it will not be so, and further, one hand is all that is generally needed for traction, leaving the other free, which can be used to adjust the screw, so that compression can be fully under control all the time, which is not the case with the other forceps. The screw can always be loosened the moment traction ceases.

He mentioned a number of cases in which he had tried them with great success. Specimens of several varieties were shown.

In discussion, Dr. Freeman said that it needed only a knowledge of mechanism to appreciate axis-traction forceps. They were correct according to theory, and the practical test proved that the theory was correct.

Dr. Freeman presented some interesting pathological specimens, consisting of teeth, bones and hair he had removed from a tumor. There was a well-formed incisor tooth, bones having something the form of the superior maxillary, and a quantity of dark blonde hair about eighteen inches long. He had diagnosticated an ovarian tumor, but found that it was not connected with the ovaries. It weighed twenty eight pounds. There were many adhesions, and it was more difficult to remove than an ovarian tumor. It contained an oily-like, sebaceous fluid and the specimens he exhibited. What was most remarkable about the case was its rapid recovery. It healed to a great extent by first intention. On the third day he removed the sutures, on the seventh day he removed the straps, and on the ninth day she rode home seven miles in a lumber wagon. There has not been an unpleasant symptom since. He used antiseptic precautions in operating.

Dr. Mann said, that he considered that the tumor originated in fœtal life, by an inclusion of the external layer of the blastodermic membrane. They were not of very infrequent occurrence. In the development of the fœtus, a portion of the epiblast gets entangled, and becomes encysted in the other tissues; and from this, it is considered, an abnormal growth takes place, which is the origin of these tumors. They may remain dormant for many years, and finally develop and grow rapidly. Their contents are usually similar to the one described, and are generally difficult to remove. They may develop in any part of the body.

Dr. Mann, at the request of the Society, on the suggestion of Dr. Colgrove, reported a case that had been diagnosticated as an ovarian tumor. The woman was thirty-three years old. The tumor had grown slowly until last spring, when it commenced growing faster, and the woman became pregnant. She had chills, and rapidly lost sixty pounds of flesh, when her condition became so critical that her attending physician, with the advice of others, felt it necessary to induce premature delivery. Dr. Mann saw her a month ago. The tumor was not large, it was somewhat soft, and he thought he detected deep fluctuation. Pulse 100, temperature 101 F. She had chills. He diagnosticated a mulitocular ovarian tumor undergoing suppuration. In operating, he found that the uterus was incorporated in the tumor, so that it was necessary to remove it with its appendages. There were but few adhesions. On opening the tumor a sack was found, which was lined with a smooth, glistening membrane. This sac proved to be the cavity of the uterus, and the growth proved to be a symmetrical enlargement of the walls of the uterus. A large amount of pus was found. The most remarkable feature of the case was her becoming pregnant when the uterus was in this condition. She made slow but good recovery. The last reports from her were favorable.

MEDICAL ASSOCIATION OF CENTRAL NEW YORK.

Semi-Annual Meeting, held at Rochester, November 16, 1886.

Reported by W. J. Herriman, M. D.

Meeting called to order at 10.45 A. M., with Dr. Benj. A. Fordyce, of Union Springs, in the chair, the President, Dr. Creveling, of Auburn, being absent. The Secretary, Dr. J. N. Arnold, of Clyde, read the minutes of the previous meeting, and they were approved. The Vice-President, Dr. A. Dann, of Rochester, having come in during the reading of the minutes, assumed the chair.

The Chair appointed the following committees: on Credentials, Dr. Craig, of Churchville; Dr. Mercer, of Syracuse, and Dr. Dewey, of Rochester; on Business, Dr. Fordyce, of Union Springs; Dr. Goff, of Cazenovia, and Dr. Angell, of Rochester; on Reception, Drs. Darrow, Weigel and Herriman, of Rochester.

Dr. W. S. Cheeseman, of Auburn, reported a case of "Nephrolithotomy" (which will appear in THE MEDICAL PRESS).

In the discussion which followed, Dr. Goff said he had seen a somewhat similar case, where an abscess had formed in or around the kidney. Sixteen ounces of pus were drawn off, and a drainage-tube inserted. The patient died and no post-mortem was held, and during life no stone was found.

Dr. H. W. Streeter, of Rochester, read a paper on "Details of Gynœcological Treatment" (to appear in THE MEDICAL PRESS).

At the close of Dr. Streeter's paper, Dr. Dann asked what material Dr. Streeter used for packing the vagina. The reader replied that he used absorbent cotton, and added that the staff of the Woman's Hospital in New York had tried oakum, carded wool, and sponge, and had returned to absorbent cotton as being the most suitable material for the purpose.

Dr. Roe moved that when the Society adjourn for dinner, it be for one hour, from one to two o'clock. Seconded and carried.

Dr. Richard M. Moore, of Rochester, read a paper on "Dislocations of the Radial Head," reviewing some experiments made by himself and his father, Dr. E. M. Moore. (This appears in this number of THE MEDICAL PRESS.)

Dr. Ely asked what result ensued in cases where the injury described was unrecognized. Dr. Moore replied that spontaneous reduction usually followed, though he had seen cases where the displacement had persisted for a week or more.

Dr. Craig expressed his gratification with the paper and said he had seen several cases of the accident, all of which recovered nicely. He was glad to learn the true mechanism of the displacement.

Dr. Fordyce had seen several cases where reduction was easily effected by flexing the arm, with the operator's fingers in the angle of the elbow as a fulcrum.

Dr. Dann said there was one important point of diagnosis in differentiating this trouble from a sprain. In this displacement the arm can be flexed only to a certain point, and there it stops until extension is made. In a sprain the arm can be completely flexed.

Dr. Roe read a paper on the "Dangers from from Continued Retention of the Tracheotomy Tube."

The discussion which followed Dr. Roe's paper led to the subject of intubation of the larynx.

Dr. Roe said he had performed intubation twice. Both patients presented cases of laryngo-tracheal diphtheria. The first case died of septic infection. The second also had much systemic infection, but is doing well, and the tube would be removed today or tomorrow. Statistics show 25 per cent. of recoveries in intubation; 35 per cent. is claimed for tracheotomy, but it must be remembered that parents will submit to intubation in hopeless cases, when they would not submit to tracheotomy. Nutrition is difficult in intubation patients, and the stomach-tube or rectal alimentation must be resorted to.

Dr. Fordyce asked if the tube left any affection of the voice or vocal chords. Dr. Roe replied that it did not; the tube was not left in place long enough to cause any permanent trouble with vocal chords, and the child could whisper even with the tube in the larynx.

On motion, the Society adjourned for one hour.

The afternoon session was called to order at 2.40. The Secretary read the following proposed amendment to the Constitution, offered by Dr. Kendall, at the last semi-annual meeting:

"The Association shall hold an annual meeting on the third Tuesday of May, which shall be held in Rochester and Syracuse on alternate years. The officers of the Society shall have power to call a special meeting either at Rochester or Syracuse at any time, should circumstances demand such meeting."

Discussing the proposed amendment, Dr. Fordyce thought that if but one regular meeting was held each year, it would be a good idea to have this meeting continue for two days.

Dr. Weigel opposed the idea of doing away with the semi-annual meeting.

Dr. Herriman said he would be sorry to see the semi-annual meeting done away with. It came at a time of year when our attention was not claimed by our County Society meetings, as in the spring, and was a pleasant and valuable bond of professional union between Rochester, Syracuse and Auburn.

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Dr. Mercer said he had moved the adoption of the proposed amendment in the interest of the Society. He had always enjoyed the sessions and profited by them, but he thought it was not best for the members to leave home and business two often.

Dr. Weigel thought that if there were too many societies, it would be better to do away with this one altogether, than to give up the custom of having two meetings every year, as had been done so long. He would oppose the amendment.

Dr. Goff doubted the propriety of wiping out this Society. It was true that it took three days of his time to attend a meeting of this Association, and he would favor the amendment, but owing to present existing circumstances, he thought it would be wise to put this matter over until the next annual meeting.

The Secretary, Dr. Arnold, said that the New York Medical Association had fixed its time of meeting at the same time that this Society met. He knew of ten members who were also members of the State Association.

Dr. Creveling said he had heard from twelve or fifteen members, that they were going to the meeting of the State Association, and could not be present at this meeting. He would very much dislike to see the semi-annual meeting done away with.

Dr. Armstrong moved that the resolution be laid upon the table until the next annual meeting.

Dr. Angell seconded the motion, and added he was very much in favor of having two regular meetings a year.

The motion to lay on the table, was carried unanimously.

Dr. Wm. B. Alley of Nunda, read a paper on "Scarlet Fever."

Dr. Goff said he wished to emphasize Dr. Alley's statement concerning the tenacity of the contagion. He had known of a case where a dress, after having been partially disinfected by sulphur fumes, had hung in a closet for three years, and was then "made over." In the process of making, the pieces were given to children to play with. Four children had scarlet fever from the poison contained in the dress.

Dr. Donn inquired if there was any scarlet fever in the neighborhood at the same time.

Dr. Goff replied that he had made diligent inquiry of physicians and others, and had found that no scarlet fever had existed in the locality for six months previously.

Dr. Mason, of Henrietta, asked if any of the members present had derived benefit from any preventive medicines? Had heard boracic acid spoken of in this connection, and would like to know if it was efficient.

Dr. Arnold said, he had learned to place reliance upon chlorine, which he generated by putting gr.x. of potass. chlorat. in ʒi. strong hydrochloric acid, and then filling the bottle with water, ounce by ounce, to a pint.

Dr. Mercer said scarlet fever was reckless in its methods, villianous in its propagation, and unreliable in its appearance. Urged extreme care in disinfection, and the closest attention to all prophylactic measures.

Dr. Craig never allowed children to go to school within eight weeks after an attack of scarlet fever, nor until disinfection had been thoroughly performed.

Dr. Armstrong, of Holly, read a paper on the "Nephritis of Pregnancy," in which he detailed the symptoms, and treatment of puerperal eclampsia.

In the discussion which followed, Dr. Craig thought much could be done by way of prophylactic treatment. If he found albumen in the urine of a pregnant woman, he gave cathartics right along. In the treatment of eclampsia, he would bleed all cases with fullness of the head and face. He always found the bromides suitable in cases where there was contraction of the pupil. If dilatation was present he would use morphine. Thought the mortality rate from eclampsia was not so great in the country as general statistics show.

Dr. Mercer would deliver as soon as possible. Had seen three cases recently where no prophylaxis had been possible. They were treated with blood-letting, morphine, chloral, and bromides, and all did well. Thought the lancet should not be discarded in these cases, but should be judiciously used in conjunction with the usual remedies.

Dr. Mary Stark, of Rochester, spoke of the treatment by diaphoresis, which she had seen used with good results.

Dr. Weigel said that as many cases occurred without renal symptoms, it seemed hardly possible to use the term nephritis, though we would admit the occurrence of a renal congestion, active or passive. Some cases were true nephritis, and were then cases of true Bright's disease, occurring during pregnancy.

Dr. W. C. Bailey, of Albion, read a paper on the "Prevention of Disease" (which will also appear in THE MEDICAL PRESS).

Dr. Alfred Mercer, of Syracuse, reported a case of simple double fraction of the right femur with subsequent paralysis and amputation of the right foot, followed by a good recovery.

After some discussion as to the best means of making suitable provisions for lunch at the next meeting, a motion to adjourn prevailed.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

For Sale.—Faradic Battery, in good repair. Address, Doctor E. C. LONG, 1339 Main Street.

For Sale.—Good practice, with furnished office, in Tonawanda. Address, Doctor HENRY FRITCHER.

SOME people suffer bitterly after the application of the tincture of iodine. M. Carles has found that almost any alkali will relieve this distress at once—a weak solution of ammonia, soda, wood-ashes, or even common soap. On tender skins such applications may be too strong, and the alkaline sulphites, bisulphites, or hyposulphites, will suffice.—*Rev. de Thérap., Oct. 15, 1886.*

THE *British Medical Journal* thinks that as nitro-glycerine chocolate tablets are allowed to be publicly sold we may soon expect to see such pharmaceutical delicacies as strychnine jujubes, oxalic acid jam, etc. The English have had enough of nitro-glycerine and would prefer to have it classed as a poison.

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THE TREATMENT AND MANAGEMENT OF TUBERCULAR SPONDYLITIS.

By Virgil P. Gibney, A. M., M. D.
Professor of Orthopedic Surgery in the New York Polyclinic.

[Read before the American Academy of Medicine in Pittsburgh, Penn., October, 1886.]

The title of my paper may seem out of place in the list published for this meeting, but I knew that many of my fellows would discourse upon Medical Education, and I knew, furthermore, that I could say nothing on that subject that would be new or interesting. With disease of the vertebræ I claim a reasonable familiarity, and while I have no instruments to present embodying new principles, I trust I shall be able to tell in the paper I bring before you to-day, how a fair amount of success may be obtained in the treatment of tubercular spondylitis. This disease I am discussing is simply Potts' Disease of the Spine. The qualifying adjective I employ is chosen advisedly. The inflammation which attacks the bodies of the vertebræ is, in my opinion, tubercular in character. I am willing to admit that exceptionally it is not. I am stating a rule. If one tells me that not a trace of tubercle can be found in any member of the family on either side of the house, I accept this as a statement based upon conviction. Interesting as the subject of family histories is, I think it is unprofitable as a matter of research. Clinically we gain nothing by our investigations. So far as my own observations go, we have the same element of chronicity in the cases whose family histories are good as we have in those cases whose histories teem with tubercular manifestations. The treatment is practically the same; the results differ very little.

Why call it tubercular? Apart from the teachings of modern pathology, apart from the evidences found *post-mortem* in cases of

Potts' Disease, apart from the clinical features which manifest themselves in the progress of the disease, the interests of the patient himself are the better subserved if we adopt the name proposed. I am well aware that I am telling the fellows of this Academy nothing new, even, in presenting this term. A late eminent fellow, whose name is known wherever surgery itself is known, many, many years ago, wrote of *tuberculosis of the spine.* The name is preferable, in my judgment, to struma, or scrofula, and in my lectures I have abandoned the use of these terms altogether. They are hard to define, and although I have given, as have many others, a definition, I do not propose to burden my hearers with it on this occasion. The terms, then, of my title are chosen with a view to calling attention to the importance of recognizing this disease as a serious one from its incipiency. We lose valuable time in waiting for a diagnosis that can be demonstrated. The teachings of the past few years have been in the direction of making a diagnosis before the appearance of deformity.

A few days before leaving home a case was brought to my office for an opinion, and there were presented so many points of interest to all practitioners of medicine that I ask no excuse for giving the details as they were given to me:

A gentleman from a western city brought me letters of introduction from two of America's most distinguished surgeons, asking my interest in the case of his five-year-old boy. The patient was brought in on a frame like that of the body of a shallow crib. The father and mother were both present and gave me to understand that there was no hereditary disease in either branch of the family. The child had excellent health to September, 1884, when whooping cough developed. It proved to be a most tedious distemper, and was followed by bronchitis and pneumonia.. The child was an invalid all that winter, and in the spring "came down with" measles. This was not well borne, and was followed by a low type of fever said to have been septic or typhoid. The summer of 1885 was passed in the country, and the nutrition of the child was given the closest attention. The parents thought the crisis passed, and toward the close of the season the little convalescent was allowed to walk about the house. Before a week had elapsed a fall resulted in a broken forearm, and a few days later the mother observed the child walking peculiarly, *i. e.*, without permitting the natural movements of the spinal column. From this time until February of present year. he would complain of fatigue, would seek rest by lying prone across a chair, a table, the floor, or the mother's lap. Repeated examinations were made by the family physician, a careful observer and a man with a well-deserved reputation as a successful practitioner. No diagnosis, I was told, was reached until one evening in February the mother discovered the significant "knuckle" between the shoulders. Next morning the medical attendant confirmed her suspicions, and from that day to the present, I am informed, the child has not been allowed to stand on the feet, or even to sit erect. The recumbent posture has been maintained night and day, and in addition thereto a leather corset has been worn.

The mother seems to have entered quite heartily and quite intelligently into all the details of treatment; and the case, to all appearance, has not suffered on account of any neglect.

I found, however, a well-marked kyphosis extending from the second to the seventh dorsal vertebra, a compensating lordosis in lower dorsal, and small kyphosis again in the lumbar region. In the cervical region, left side, and anteriorly, I found a fluctuating tumor simulating a suppurating gland or collection of glands. There had never been any paralysis, and the child, despite the long confinement, was happy and apparently well nourished. Now, the points that presented were:

1. Development of the tubercular diathesis in a child whose family history is good. The whooping-cough, the tardy convalescence, the chronic bronchitis with exacerbations, the measles later, and the fever following this disease;—what better conditions could one have for the development and the evolution of tubercle?

2. The traumatism at the close of this long illness as an exciting cause.

3. The difficulty experienced during a period of four months, of making a diagnosis, notwithstanding repeated examinations. The mother assured me that the physician would strip the child and examine critically from head to foot, employing all the tests given in the text-books.

4. The increase of deformity with the patient always in the recumbent position, and with the employment of apparatus besides.

Such points, gentlemen, seems to me pertinent to my subject, and with a word now about the use of the term *Spondylitis* I pass to the body of my paper.

The literal significance of the term is at once apparent, and we wonder why the disease has not been called Spondylitis, rather than Potts' Disease or Caries of the Vertebræ, or, indeed, any of the names which we employ for its designation. The terms necrosis and caries are employed to represent different results, or, indeed, parts of osseous inflammation. *Ostitis* covers the ground fully; and if resolution does not take place, it matters little whether the resulting death of the parts is molecular or *en masse.*

Several years prior, however, to the employment of the term spondylitis for vertebral caries, it was employed to designate a rheumatic imflammation confined to the periosteum covering the lateral masses and spinous processes; and the inflammation resulted in increase of tissue rather than decrease. This condition was found to explain many of the so-called cases of Spinal Irritation, and with the exact lesion recognized therapeutics was simple. Neurologists were quite familiar with this kind of spondylitis, and in this discussion no one thought of a tonic inflammation of the bodies of the vertebræ. Within recent years Orthopedic and general surgeons have appropriated the term, and we seldom think of it as meaning anything else than Potts' Disease.

Reluctantly, therefore, I fall in with the rest; but I must distinguish the disease we now consider from the rheumatic or rheumatoid affection by the qualifying adjective, *tubercular.* The treatment adopted by nearly all surgeons is based upon one or two conditional principles which most men recognize without hesitation.

Rest and *fixation* so secured that confinement to bed or house may be strenuously avoided are the principles to which I refer. The means for securing the objects desired differ in construction and detail according to the taste and teaching of the surgeon, and I do not come before you this morning to advocate any special form of apparatus as preferable in all cases to all others. The doctrine I preach in season and out of season is fixation and rest. I have as much respect for, and treat with as much consideration, the bone that is inflamed as the result of chronic disease as the bone that is inflamed as a result of fracture. I know that the one is of long-standing, and resolution, even under the most favorable circumstances, is seldom attained. Still, I am by no means a therapeutic skeptic, and my conviction grows the stronger as science advances, that resolution of an ostitis, be it simple, rheumatic, or tubercular, can be and ought to be attained. To secure this an early diagnosis is indispensable. Given the diagnosis, treatment and management of the individual case ought to accomplish the result desired.

The special kind of treatment will be of little avail if the case be not managed by one who appreciates the gravity of the disease, the incidents to which it is subject, the complications that may arise, and above all the length of time required to pass through all the stages. If one of you recognize a tubercular process in the lungs of one of your patients, or even if you recognize a condition that leads you to suspect a phthisical process, you realize at once the importance of a close attention to the patient for a long period of time. Tubercular processes in bones do not disappear in a few months.

STEEL APPLIANCES.

If one can command the assistance of a good instrument-maker and himself possesses a talent for fitting and altering to fit, a properly made steel brace will be the easiest and perhaps the most satisfactory means of support. As a rule the ordinary "braces of the shops" are very unsatisfactory instruments to deal with. They require so much modification that the average practitioner naturally becomes discouraged. Certain tools, as wrenches, screws, etc., are necessary to the management of one of these appliances. The instrument-maker, if he holds himself responsible for the fit of the brace, must take the measurements himself; and he seldom appreciates the importance of giving support just where the surgeon himself knows such support is necessary. The responsibility is divided, as a rule, between the surgeon and the instrument-maker; while the unfortunate patient is the one who suffers by reason of the combination.

The Antero-posterior Spinal Assistant of Taylor's is an appliance that will yield good results if properly managed. Under skilled hands deformities are claimed to be lessened, and evidence certainly exists that even projecting spinous processes have actually been reduced. The evidence is in tracings taken by means of lead strips.

I confess, however, to a certain skepticism as to the reliability of such tracings. Still, making allowance for errors here, I am convinced that certain patients do *exceptionally* get perfect relief from deformity.

The Taylor brace, and by this brace I mean the spinal assistant employed both in Dr. Taylor's private hospital and the hospital and dispensary he founded, is the only apparatus for which occasional perfect relief from bony deformity is claimed. This appliance must be made to fit with absolute exactness, and the good fit thus obtained must continue for at least two years. The spine must rely on this as if it were a new spine. The parts diseased get rest, and by means of properly regulated pressure and leverage-power the good work is accomplished. How often, though, this brace is abused! There is usually much difficulty in securing one that can be so shaped by the surgeon that all the important parts get support. The base, which extends along the ridge on either side of the spinous processes, should rest snugly in the groove between the spinous and transverse processes; and, if extra pressure is needed over the bosse, appropriate pads should be at hand. When the disease invades a region above the seventh dorsal the chin piece is required. A nicety of adjustment is necessary to secure any kind of comfort or relief.

The spinal brace used at the Hospital for the Ruptured and Crippled is probably susceptible of as much abuse as any form now in use. Perfect fits are not often secured, because the braces are made according to *measurements* and not after *patterns*. The steel employed is so malleable that the shape is seldom retained even when a good fit has been secured. The back bars which run vertically are very wide apart, and the pressure is brought to bear chiefly on the ribs. If one employ this form of apparatus it can be made much more serviceable by not allowing patient or friends to remove it for adjustment. This should be the duty of the surgeon, and the greatest care should be exercised that the patient be not allowed to sit up or stand while the apparatus is loose or removed.

It has been my good fortune to follow many cases to a successful issue with this appliance. I have also seen many in which aught but a good result was obtained, despite the most assiduous attention. The one great objection to this as well as to other forms of steel braces is that it is *removable.* The patients take advantage of this liberty, and on the most trivial pretexts the brace is taken off. The splint is thus removed temporarily, it is true, yet all surgeons know how much damage can be done in a short time to tissues nature is doing her best to repair. The only way of obviating this objection is to permit no interference with the apparatus. Whenever it is necessary to have it removed, let the surgeon himself attend to this.

From what I have said the inference is perhaps drawn that my preference is for plaster of Paris. While I employ this dressing with my charity cases almost exclusively, I use the removable braces very often, especially when I can personally conduct the management of the case. The general practitioner can best manage his cases, I think, with the plaster of Paris dressing. And yet I am sure that even this dressing requires much skill and dexterity. The mere rolling of a plaster of Paris bandage about a child's body does not make a plastic jacket. Fortunately the methods are so well set forth by the surgeon whose name is so intimately associated with the development of this spinal support, that it seems a useless task for me to tell this intelligent body how to apply a plaster of Paris jacket.

A few general rules will not be out of place, as practitioners can not become too familiar with them.

1. Use the best dental plaster, and see that it has not been exposed to a damp atmosphere.

2. Employ the smooth crinoline for bandages, into which the plaster is rubbed.

3. Bandages from two to three inches wide and six yards long are the more easily handled.

4. Do not employ salt or any other agent in the water for the purpose of hastening the "setting" process. Use simply warm water.

5. Be sure that each turn is rubbed well into all the inequalities of the body, and that each portion of the jacket is thoroughly rubbed before the "setting" is complete.

6. Use a skin-fitting vest next the body.

7. Never make the walls of the jacket to exceed one-eighth of an inch in thickness. In young children one-sixteenth of an inch will be abundantly thick.

8. Never rest satisfied with a poorly-fitting or a heavy jacket, and lose no time in securing one that better fulfills the requirement.

An excellent corset can be made of plaster of Paris for convalescing cases, by cutting the jacket down the front and trimming up in the same manner the jacket for lateral curvature is trimmed. The leather or felt jacket are good substitutes, because they do not need renewing so often.

HOW SHALL ABSCESSES BE TREATED?

In the treatment of abscesses I am not governed by any hard and fast rules. When I see them early I do nothing but allay apprehension. When they get large and by their pressure interfere with neighboring joints or important muscles, I aspirate, expecting soon to repeat the operation. When they cause pain and constitutional disturbance—a very infrequent occurrence—I open antiseptically and insert a drainage-tube, employing appropriate dressings.

It often happens, however, that, while I am waiting to operate, nature forestalls me and the results are equally good. My aim is to treat the bone disease whence the abscess is derived, and I feel sure of very little annoyance.

When deformity of the thigh occurs in consequence of psoas abscess I allay anxiety by assuring the family that this will pass away; and I resort to no measure for controlling such deformity.

The constitutional treatment of tubercular spondylitis is nothing specific. Nutrients, such as cod-liver oil and the hypophosphites, yield better results than alterative tonics. I employ stomachics and iron tonics as they are indicated, and my aim throughout is to put the health of my patient above par and so to maintain this high degree of excellence. Change of air and climate serves me well in many of my patients, and I make it a point to have my out-of-town patients come to the city at seasons when patients do best in New York or its environs.

A class of cases denominated "desperate" are occasionally met with, and we should by no means despair of bettering their condition.

My friend Dr. Benjamin Lee, a distinguished fellow of this Academy, has written a very valuable little paper entitled "Nil Desperandum in Spinal Cases"; and has shown how in those patients who seem the most hopeless, a vast improvement can sometimes be effected by mechanical apparatus. He states quite truthfully, too, that it is never too early and never too late to employ apparatus in this disease.

When amyloid degeneration becomes well-established, I confess that my courage fails me; and it is in these cases that operative procedures on the bones themselves may hold out some hope of relief.

CONCLUSION.

To conclude this desultory paper, let me say that early support and long-continued support are essential to the successful management of a case of tubercular spondylitis. Secure comfort to the patient with whatever apparatus you employ. Learn to rely as little as possible on home coöperatlon, and when this must be had let your directions be full and explicit, and secure if possible, a rigid adherence to the same. Manage all the detail of the apparatus, and all the details pertaining to the case.

23 Park Ave.

CASE OF NEPHRO-LITHOTOMY.

By W. S. Cheesman, M. D.
Auburn, New York.

[Read before the Medical Association of Central New York, Nov. 16, 1886.]

My patient, a woman, æt. about 35, first came under my care in the middle of July, 1886. She gave the following history: For some years attacks of renal colic on the right side, followed by the passage of sand and calculous fragments *per urethram.* Last winter was very ill and confined to her bed with pain in the right loin, fever and cystitis. About this time she discovered a tumor in the right loin, which was examined by several physicians and variously diagnosed. Gradually her health improved, and she became able to be about and do light work. The tumor, however, remained, and increased slowly in size, causing occasional attacks of severe pain, and more or less constant distress. The urine continued to be loaded with pus, and the patient used to irrigate the bladder herself daily. The appearance of pus in the urine was intermittent, *i. e.*, there were times when it was abundant and times when it was scanty. It was never absent, and it appeared most profusely along with or immediately after attacks of severe pain in the tumor.

I made several careful physical examinations of this tumor. It was of an oblong spherical shape, and of the size of a large fist. It was movable and could be rolled and mapped out easily by bimanual palpation, one hand being placed behind the right loin, the other over the right side of the abdomen in front. It descended with the liver in deep inspiration, but could be isolated from that organ. It felt very firm and smooth, except at the lower extremity, where a hard nodular bunch projected from the otherwise regular contour. The subsequent operation demonstrated this to consist of caculi imbedded in the ureter. Fluctuation could not be satisfactorily made out, but the spherical shape of the tumor and its history made me anxious to explore it with a hollow needle. This was accordingly introduced through the lumbar regions, and at once filled with thick pus, confirming my suspicions that I had to deal with a case of pyonephrosis, probably from calculus.

On July 31st the tumor was aspirated and some four or five ounces of pus withdrawn. It then refused to pass the needle, and the operation had to be abandoned. During the aspiration the needle was once felt to grate upon a calculus.

A radical operation was determined upon, and, after proper preparation of the patient, a nephrotomy was done, with the assistance of Drs. Amanda S. Hickey and F. H. Parker. The patient having been etherized and turned upon the left side, under which a pillow was placed for the purpose of rendering prominent and tense the right loin, the usual lumbo-colotomy incision was made in the latter, its center being, however, one-half inch posterior to that of the colotomy incision. The tissues were divided layer by layer, and when the tumor was neared the operation was guided by frequent tappings with the hypodermic. A director was finally forced into the abscess, and by divulsion a large free opening was made, through which thick pus discharged to the amount of at least eight ounces.

The finger introduced into the cavity encountered a stone (the largest of the specimens), which with several others was readily removed. The calculi lodged in the ureter gave a good deal of trouble. The walls of the passage enclosed them tightly—each being virtually encysted—so that difficulty was experienced in seizing them with the forceps. Guided by the forefinger the instrument was over and over again felt to enclose the stone, but as often it slipped, and it was only after repeated efforts by my able assistants and myself that the passage was finally cleared of its series of encysted calculi, which, of course, were broken in the process.

The cavity was thoroughly irrigated, large drainage tubes introduced, three stitches were taken in the anterior angle of the wound, and a pad of absorbent jute placed over its opening.

The patient rallied well, and, with the exception of some immediate severe abdominal pain, suggesting peritonitis, but quickly dispelled by morphine, has made a gradual but uninterrupted recovery. The highest temperature registered was 100¾°. From time to time small stones, fragments, etc., have found their way out with the discharge and into the bladder, escaping through the urethra. Urine escaped through the wound, showing that some renal tissue had escaped destruction. The pyuria has gradually diminished. With the contraction of the abscess cavity the discharge has lessened and is now very inconsiderable.

The patient's present condition is then as follows: She is able to be about her house and to do light work. Her appetite is good and she is gaining flesh. There is a fistula in the loin, which discharges a little pus and urine daily. A uterine sound can be passed along this tract nearly to the bladder, but the passage is steadily contracting.

A LITTLE chap told by his mother to say his prayers and to ask for what he wanted, prayed for "one hundred brothers and fifty sisters." The mother was so disgusted with the petition that she hurried the little sinner off to bed before he could say "Amen."—*Exch.*

OIL OF PEPPERMINT FOR BURNS.—It is suggested that oil of peppermint is very useful for burns. The oil is painted on the affected part with a camel's-hair brush, and the pain is said to be immediately relieved.—*Australasian Chemist and Druggist.*

MALARIA DURING PREGNANCY.

BY GEO. SEYMOUR, M. D.

[Read at a meeting of The Utica Medical Library Association, December 6, 1886.]

Having, during the past ten years, met with a comparatively large number of cases of malaria complicating pregnancy either before or after parturition, I have thought the subject to be of sufficient interest for discussion at the present time.

Text-books on obstetrics generally make no mention of it, Lusk's being the only one in which I know of it being given definite notice and treatment; while treatises on malarial complaints, so far as I know, do not refer to malaria as a complication of pregnancy. The subject may be said to be hinted at and possibly properly disposed of in works on obstetrics in which, among the general causes of abortion, is mentioned the fact that any debilitating disease producing a septic or anæmic condition of the blood may be a cause of abortion. Systematic writers on malarial affections mostly confine themselves to the consideration of such cases as are traceable to swamp poisons or miasm as a recognizable cause and which are characterized by periodic fevers, usually preceded by chills.

The word malaria means bad air, and in this sense I prefer for the present to use it, not restricting it to those forms of fever or systemic conditions the etiology of which can be traced directly to swamp miasm; for the most common affections of malarial character which we meet in general practice do not usually have their origin in swamp miasm, and can not be traced beyond the absorption through some channel of the system of some form of bad air or substance affected by it. Until a more definite idea of the cause of malaria is fixed upon, it seems to me just as rational to use the word in the broader and more general sense as in the very restricted one.

In "Pepper's System of Medicine," Dr. Samuel Bemiss introduces the chapter on malarial fevers by stating that "the term is synonymous with swamp or ague poison," and that "malarial affections, therefore, comprise all those diseases or morbid manifestations which swamp poison produces in the human organism";

nevertheless, he states that "the substantial essentiality of malaria remains as yet undemonstrated."

The chief features in the natural history of malaria, which different authors are quite unanimously agreed upon, namely, a certain degree of warmth, moisture and favorable soil for development, all point towards it as being an organism. But Dr. Sternberg, of the United States Army, in a recent work on "Malaria and Malarial Diseases," after reviewing the various experiments on the subject, notably those of Klebs, Tomassi, Crudeli and himself, says: "So neither the researches which have been made nor the speculations in which we have indulged have brought us to the point of answering in a definite manner the question, What is malaria? We are reduced to the necessity of concluding with an acknowledgement of ignorance as to the real nature of this widely-distributed poison."

We meet with so many complaints, some being of the most serious character, in which there enters, to a greater or less degree, that element for which we yet know no better term than malaria, it seems to me not at all preposterous to regard malaria, especially as we see it in old cities and towns, in the general sense a septic condition of the system giving rise to the numerous forms of so-called malarial symptoms, sometimes of a definite periodic character and traceable directly to swamp miasm as a cause, but oftener of a more indefinite nature, giving rise to a series of unclassified and irregular symptoms and conditions and *not* traceable to any specific organic element as a cause.

I will not take time nor give myself the trouble to refer to the long list of allied malarial complaints; for if there is such a thing in existence as a hydra-headed disease, I verily believe malaria to be the monster.

Malaria during pregnancy may be either active or passive. If active, the characteristic chills, fever, sweating, malaise and prostration will exhibit themselves before parturition, and the probable result will generally be an *abortion.* If latent, the chills, fever, sweating, etc., will not present themselves until after parturition, when the weakened condition of the system in consequence of labor will render the subject incapable of longer resisting the toxic influence of the miasm dormant in the system, and thus a regular malarial fever will follow which may be, and I believe often is, mistaken for puerperal fever or a pelvic phlegmasia.

A brief account of a few cases will help to illustrate the foregoing proposition:

Mrs. W—, aged thirty-five, mother of three children, aged, respectively, fifteen, twelve and six years, sent for me to visit her at her residence, May 17, 1883. I found her in a high state of fever, temperature 104° F., pulse 120, with bowels constipated, stomach irritable, some headache, and quite nervous and irritable generally. She stated that the day before she had a slight chill about 12 M., followed by some heat and fever in the afternoon, and on the present day had a very severe chill at noon, followed by the heat and fever which I then noticed upon her.

I gave her tincture aconite, to be taken during the afternoon and evening, ordered a cholagogue cathartic, to be given at 9 P. M., and quinine in free doses the following morning.

On the afternoon of the 18th her pulse was 90, and temperature 100, with feelings of more comfort and improvement in every way, I ordered a repetition of the quinine the next day, which was followed in the afternoon by a normal pulse and temperature, so that it seemed advisable to give only a small amount of quinine on the third day, when, although there was no return of chill or fever, she began to flow as though from natural menstruation.

She stated that she had menstruated six weeks before, but did not think she was pregnant, for she often "went" five weeks, and sometimes six without menstruating.

The flowing continued in an apparently normal manner five days, there being in the meantime some fever each afternoon, until I was summoned to visit her on account of excessive flowing and fainting having come on suddenly.

I immediately resorted to the use of a tampon, gave ergotin hypodermically, enjoined perfect rest in the recumbent position, and kept her in that condition twenty-four hours, at the end of which time there was no flowing but an occasional uneasy feeling in the pelvic region, simulating a uterine contraction pain, but not pronounced enough to be called such.

After three days' use of the tampon and anodyne to allay excessive pain, a small placenta presented at the internal os, which I removed with forceps, and after washing the uterus and vagina with an antiseptic douche, using once more a tampon and giving a dose of ergot and opium, there was no more appearance of hemorrhage, nor any uterine disturbance, but there was a return of fever, characterized by an occasional slight chill with little or no rise of temperature in the forenoons, and followed in the afternoons by rise of temperature and increased pulse rate, accompanied with much prostration of strength, irritability of stomach and diarrhœa; making all together a very disagreeable case of malarial fever, which did not fully yield to the management I was able to give it until a full month had elapsed from the time I was first called.

This case was one of six which I saw during the summer and fall of 1883, in which there was fever of more or less marked periodic character with abortion or tendency towards it during the early months of pregnancy. In two of the six cases there may have been some effort made to produce a return of the menses, but I do not think it would have been successful had there not been latent malaria in the system excited to febrile activity, which, being treated by quinine, brought on abortion.

One was of a woman who frequently miscarried, being the subject of a deep bilateral cervical laceration, retroversion and sub-involution of the uterus. Two others, one at the fourth, the other at the sixth month of gestation, were fortunately carried along by careful management, and good intentions on their part, to the end of the full term, when they were delivered of living, healthy children.

In the year 1884 I saw one case of a like description, in the year 1885 two and this year, 1886, one, which was of a lady who has had repeated attacks of malarial fever during the past three years, was married in January last, had an attack of chills and fever in April, which was treated with large doses of Warburg tincture, became pregnant in May, and in July, when two months "gone," was attacked with pains and flowing, which were checked and kept under control from its early commencement, abortion thereby being prevented, so that now she is nearing the end of her full term of pregnancy. In this case I shall look for a return of fever after confinement, and will deem myself fortunate indeed if able to avert it. A short account of one more case of malarial fever following parturition, and I shall have done with rehearsal of cases.

Mrs. A——, aged twenty-five, married at twenty-four, gave birth to a fine, healthy child at full term January 10, fifteen months after marriage. She had during the carrying period many unpleasant feelings, which she had never experienced before, such as headache, pains in the back, irritable bladder, and particularly much drowsiness with a feeling of disclination to make any physical exertion whatever, but had not sought medical advice thinking it all due to her "delicate" situation. On the eighth day after the birth of the child she was seized with a severe chill, followed by a temperature of 105° F., and this latter in about six hours by profuse perspiration. The next day there was no chill, very little fever and, comparatively speaking, no great amount of systemic disturbance; but on the tenth day, two days from the time of the first chill, there came a return of chill, fever and sweating, followed by considerable general prostration. I then became fully satisfied that I had a case of malarial fever to deal with instead of a regular puerperal or septicæmic, as I had feared, and the subsequent progress of the case proved the diagnosis to be correct. I have many other times during the past ten years observed and treated similar cases, milder in type, but of these same distinctive features, so that now when I see a case of fever of any sort after a recent confinement, the consideration of malarial fever most naturally comes into the differential diagnosis of the case.

Lusk affirms that "malarial fever does not produce abortion except in rare instances, even when the febrile phenomena persist up to the termination of pregnancy"; but admits that, "particularly during the second and third weeks of pregnancy, a latent malarial cachexia may exhibit itself."

It may be true that abortion is not always brought on directly by malaria; but, indirectly, I regard it as a frequent cause, even in pregnancy advanced as far as the sixth month, and that *vice versa*, malarial fever is often brought into active paroxysmal manifestation through the influence of pregnancy. I say abortion is indirectly caused by malarial infection for the following reason: No one thinks of allowing an evident malarial condition of the system, whether there be active chills and fever or not, to go without its legitimate treatment, which is based upon the administration of quinine in greater or lesser quantities, and *this drug has very conclusively been proved to be an oxytocic of great potency*, so that in giving it in cases of malarial diseases complicating pregnancy, its effect will be two-fold, first, *to abort the fever;* second, *to abort the fœtus.*

I think the substitutes for quinine we are in the habit of using, such as Warburg's tinct., arsenic and iodine, carefully administered, with the exercise of great care to keep up a maximum degree of elimination from the system through the channels of the bowels, kidneys and skin, are safer to give and less likely to excite uterine hemorrhage or contraction, thereby lessening the tendency to abortion, and assisting the reproductive system in its exercise of a normal office-work.

The importance of distinguishing between puerperal malarial fever and puerperal septicæmia after parturition cannot be too strongly emphasized. Dr. Fordyce Barker, in an article on "Puerperal Malarial Fever," published in *The American Journal of Obstetrics* of April, 1880, gives a very instructive account of this form of malaria during pregnancy, and, in discussing the differential diagnosis between it and periodic puerperal fever, septicæmia, phlebitis, or metritis, says: "Puerperal fever generally appears between the first and third day after delivery, very rarely after the fifth, while the chills are not recurrent, nor are there marked remissions of the symptoms; while usually with chills there is a sudden development of abdominal pain often vague and undetermined in its seat, but generally beginning in the hypogastrium, and the pulse constantly frequent, with periods of several hours of remission."

The diagnosis having been carefully made, and a case of fever after parturition determined to be malarial instead of epidemic, puerperal, septicæmic phlebitis, or metritis, a great cause of apprehension on the part of the patient, friends and physician is removed, and, although puerperal malaria is no insignificant disease to deal with, there is a much more cheerful outlook for all concerned than if either of the former were the disease in question.

My method of treating malarial fever after parturition differs very little from what I pursue in malarial fever uncomplicated, except that I have found it necessary to give more stimulants and tonics to overcome the great weakness, anæmia and general prostration induced by the double draft on the system of malarial poison and parturition at the same time.

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THE SERPENT AS A THERAPEUTIC MYTH.

In our last number we sketched briefly the practice of medicine in the ancient temples of Greece. The temple first dedicated to Esculapius in the Peleponnesus was situated in the city of Titanus. Another, almost equally celebrated, was located in the Peleponnesian city of Epidaurus. In this one a statue of colossal size represented the god of Medicine, one of whose hands rested on the head of an immense *serpent.* The country round about was infested with non-venomous snakes, which were employed by the priests in those performances before alluded to as jugglery and trickery, to fill the people with awe and superstition. Sometimes even the god (Esculapius) was supposed to appear under the form of a serpent.

In fact, the serpent myth is one of the oldest in history, and one particularly connected with the history of medicine. The serpent was one of the primitive Chaldean trinity and represented the source of knowledge. In the Egyptian cult he was the giver of happiness and of health. In all the ancient mythologies he seems to have had a power for good or for evil, and consequently was a being to be propitiated and worshipped. Another idea intimately associated with the animal was that of *life*, future rather than present. A sacred serpent was kept in all the Egyptian temples, and Isis, the goddess of life and healing, was made to wear a crown formed of asps. Quite universally, also, the serpent was made the symbol of the male generative principle. As such, in connection with the *tree of life*, it figures prominently in the legend of the fall. Moreover, the Hindoos and Persians have virtually the same legend. It will be remembered, too, that Abraham was a Chaldean, that his father, Terah, was "a maker of images," that the *teraphim* (same word as *seraphim*) were serpent images, and that the seraph was the serpent-symbol of the exodus from Egypt.

Indeed, this serpent-symbol played no small therapeutic part in the Israelitic wanderings. Thus we read that after the people had been bitten by fiery serpents (more accurately, burning serpents) Moses prayed for them, and that "Jehovah said unto Moses, make thee a fiery serpent (literally a *seraph*), and set it upon a pole; and it shall come to pass that every one that is bitten, when he looketh upon it, shall live."—Numbers, xxi. Whereupon, Moses erected the brazen serpent, and the sacred chronicler was not called upon to record any further deaths. This symbol, whose magic power is thus attested, was none other than that of the Phœnician Esculapius or *Taaut*. It may be of interest here to note that philologists recognize in the Phœnician Taaut the Semitic *Seth*, whence the Roman *Saturn*.

Similar myths existed among the earliest American races. In Aztec and Mexican annals the first woman, whose name is translated "the woman of our flesh," is represented as always accompanied by a great male serpent. This serpent is also the sun god, and must have been the father of the human race. Among various American tribes there is singular unanimity on this matter. So, also, among various African races. The universality of the serpent symbol is astonishing, and everywhere it appears with either a physiological or a therapeutic significance.

Coming down to much more historic times we are told, for instance, by Clemens Alexandrinus, that the Bacchanals go through their "orgies in honor of the frenzied Bacchus * * * crowned with snakes." And Aurelius Victor relates "that during the year 350 of the foundation of Rome, the city was ravaged by a terrible pestilence; the senate sent six deputies to consult the oracle at Epidaurus. After they had arrived at the temple, and were admiring the colossal statue of the god (*vide supra*), suddenly an enormous serpent issued from beneath the pedestal. The sight of it impressed every mind more with veneration than with terror. It moved tranquilly through the astonished crowd and entered the vase of the Romans, in the chamber of Ogulnius, the chief of the embassadors. The sacred reptile was piously borne away, and when the vessel of the embassadors was approaching the city of Romulus, it sprang into the waves and swam rapidly to an island in the Tiber. A temple was immediately erected to Esculapius on that spot and the pestilence ceased."

All of which reminds one of the Mosaic narrative. And thus, through all the nations of antiquity, we trace the belief in some peculiar vivifying or curative power possessed by the ophidians. We trace the emblem also in many Christian symbols, and relics of the belief can still be found in many local habits, customs and superstitions. Whether homœopathic credulity as to the virtues of centessimal attenuations of *lachesis* (poison of the adder) is a persistence of this belief in other form we do not attempt to state. Whether, also, the preternatural power to see these reptiles which copious libations of alcohol confer, is a relic of the ancient worship, is a moot question concerning which we do not care to commit ourselves. At all events, we have just quoted the manner in which they figured in ancient revels, while common clinical experience of today illustrates the equally imaginatory part they still assume.

INFLUENCE OF THE EMOTIONS ON HEALTH.

In his thesis on moral therapeutics, M. Alphandéry recalls from history some illustrations of the influence of the emotions on health, and even on life. Joy may not only occasion changes of varying nature, but it can also cause death. The case is cited of Chilo, ephorus of Lacedæmon, who died of joy while embracing one of his sons who had been a victor in the Olympic games.

According to Aulus Gallius, Diagoras of Rhodes met the same fate on seeing his three sons crowned in one day at the Olympic games.

The consul Juventius Thalna, cotemporary of Tiberius Gracchus, was offering a sacrifice, relates Valerius Maximus, when he learned that the senate had decreed in his honor a thanksgiving to the gods. He read the announcement with an eager eye, then swooned, and fell lifeless at the foot of the altar.

Sophocles, having arrived at extreme old age, says the same author, read a new tragedy before an audience the result of whose suffrages he had awaited a long time with anxiety; they were unanimous in his favor, and his joy was so great that it gave him his death blow.

Montaigue tells of Pope Leo X. that, having been informed of the taking of Milan, which he had ardently desired, his joy threw him into a fever, of which he died.

A violent grief, a disappointment keenly felt, are capable of producing like results. The translator of Feuchtersleben has collected a number of historical examples illustrating this.

Isocrates died of regret shortly after hearing of the battle of Chæronea.

Terence died of grief at losing, by shipwreck, one hundred and eighty plays that he had prepared.

Horace survived but a few days the loss of his old friend and benefactor, Mæcenas.

Sibouyah, Arab grammarian of the eighth century, died, it is said, of sorrow because, in a discussion that he had with another learned man, the Caliph Haroun-al-Raschid had not been of the same opinion as himself on a point in grammar.

Andreas Vesalius died of regret for having begun an autopsy on a man while his heart was still beating.

Pope Clement IX. succumbed to disappointment at not having been able to prevent the loss of Candia.

It is not a question of rare exceptions. Amaury, the heretic, died in 1209 of mortification at having been forced to renounce his doctrines; Ximenes, in 1517, because he had fallen into disgrace; Cheke, in 1557, at having been converted by force; Valentia, the philosopher, 1598, because the Pope upbraided him with falsifying a passage from St. Augustine; the poet Sarasin, in 1654, because the Prince of Conti struck him with his tongs, etc., etc. One can find all these things related at length in the notes by the translator of Feuchtersleben.

SUDDEN DEATH FROM INTRODUCTION OF A NEEDLE.

Dr. J. C. Reeve, of Dayton, Ohio, reports in the *Medical News* for January 1 the singular case of a young man who had an extensive abscess in the liver. Other means of relief failing, he decided to aspirate the pus. When the patient was informed of the trifling pain inflicted by the needle, his alarm subsided. The needle was introduced below the cartilages to a depth of three inches. Within one minute and a half he was dead.

The case appears to have been utterly inexplicable, and in nature akin to the sudden deaths which have been known after extraction of teeth, lancing of felons, etc. Dr. Reeve is of opinion that under full anæsthesia this would not have happened, but that under *partial* anæsthesia it would have occurred as it did, but that the death would have then been ascribed to the anæsthetic.

* * *

It is announced that Prof. Kolomnin, of St. Petersburg,—from whose work, by the way, we quoted on page 15 of the last issue—has committed suicide, after having failed in the performance of a hazardous operation. While we do not commend his example to our readers, we cannot help thinking how sadly the American surgical contingent would be depleted were every man to do likewise under similar circumstances.

* * *

The Pacific Record of Medicine and Pharmacy is the title of a new journal published in San Francisco, devoted to giving a resumé of medical and pharmaceutical progress throughout the world. Judging from what we have seen of it, this avowed purpose is very judiciously carried out. A portion of each issue is printed in Spanish.

* * *

Other new journals which have come to us lately are *The Doctor*, edited and published by C. A. Wells, 20 Astor Place, New York, which is a pleasant, gossipy, newsy semi-monthly, just the thing for the doctor's office table; and *Practice*, a new medical monthly of small size and price, but of neat appearance, devoted to the eminently practical, edited by Dr. J. F. Winn, Richmond, Va.

Correspondence.

LETTER FROM PHILADELPHIA.

Rare Case of Lymph Scrotum.—The College of Physicians' Centennial.

January 10, 1887.

EDITOR MEDICAL PRESS:

Dear Doctor—Though the kindness of Dr. Styer, of the Marine Hospital service in the German Hospital in this city, I saw a case of that very rare disease called lymph scrotum. The case was a young man aged twenty-four, single, born in Mobile, Ga., and by occupation a sailor. He says that in the middle of December, 1885, he first noticed a slight, painless swelling of the scrotum. In fifteen days days the organ had enlarged to almost twice its normal size, and was slightly nodular, the elevations being distinctly whiter than the rest of the scrotum. It then burst simultaneously and dicharged a large quantity of white, milky fluid. At the end of two weeks it had filled up again and once more burst, discharging the same fluid as before. Filling up gradually after that, it remained unchanged. In the early part of this winter he applied at the hospital for relief. During all this time he was able to do his usual work. The case then appeared as described, the scrotum large and dependent, the lymphatics much distended, causing the white nodular appearance. When one of them was pricked with even a fine needle it apparently drained the whole system of lymph, producing the same effect on the man as would profuse hemorrhage; he grew faint, had to lie down, and was "laid up" for forty-eight hours, during which time the scrotum gradually filled up again. When the patient remained in a recumbent position for several hours, the swelling would almost entirely disappear, and on rising and remaining in an erect position, would return completely in half an hour. Manipulation and pressure also reduced the size of the scrotum. The lymphatics of the groin were somewhat enlarged, but nowhere else in the body did there seem to be any involvement of these structures, and in every other way, with the exception of having lost some flesh, the man seemed to be quite healthy and was able to be about and do work when the scrotum was properly supported. He had had gonorrhœa but not syphilis.

The *filarium sanguinis hominis*, which is supposed to be the cause of the disease, was looked for in the blood and lymph at all hours of the day and night, but not found. The disease is said to occur quite frequently in China and the tropics generally, but is very rare in this country. This man had never been farther south than the West Indies. Dr. Styer exhibited the case before the Philadelphia County Medical Society, asking for suggestions for treatment. He proposed amputation of the scrotum, or ligation of the lymph ducts in the groin, as a possible relief, but thought it would do little good. No other suggestions were made. Unfortunately the patient went out of the hospital on a pass and never returned.

* * * * *

The centennial anniversary of the College of Physicians of Philadelphia, celebrated on January 3d and 4th, was a memorable occasion in the history of that oldest of medical societies in America, as well as of American medicine. It was opened with an address in Association Hall by Dr. S. Weir Mitchell, president of the college. Distinguished medical men from many cities were present. The address was very interesting and contained an almost complete history of the college from its founding, on January 2d, 1787, to the present time, with biographical sketches of its most prominent members. The speaker dwelt especially on "the vivid and emphatic personality of Dr. Benjamin Rush," of whom he said:

> "Look at his portrait by Sully, in our hall. It has the scholar's hands, the largely-modeled head, the contemplative blue eyes of the observer; the nose and chin strong, firmness in the mouth, and a trace of too critical tendencies in the droop of the lines of the lips, withal a general expression of tranquil benevolence, a face like the man's life and character, full of dissimilars, with a grand total of good. He was a statesman, a scholar, an army surgeon, a punctual and careful physician, an actively religious man, a far-seeing and courageous philanthropist, and a sanitarian far in advance of his day. These are what I might call four careers. When timid men fell out of the Continental Congress he was elected to that body, that he might sign the Declaration of Independence, and was the only physician whose name is on that energetic arraignment of the Crown. * * * He was surely, next to Franklin, the greatest citizen of Pennsylvania."

Then he graphically describes the pestilence of 1793 and '97 in these words:

> "To speak of this awful summer is to speak of a population degraded by the very insanity of fear. The rich fled first, and, at last, almost all who could go. In round numbers, Philadelphia had 6,000 houses and 49,000 souls. Some 3,000 houses were closed. Twelve thousand persons fled to the country—Carey says 17,000. Of those left behind, 11,000 took the fever, and one-third of these died. Before this appalling death-rate all but a rare few gave way. The churches were shut; most of the weekly papers ceased to appear. For the laborer there was no work. At last family ties were broken, men fled from their dearest; whole families deserted the bed where the father lay dying, nurses were hardly to be had, and still the sombre death-cart went its nightly round with its negro driver, and in answer to the dreary cry, 'Fetch out your dead!' corpses were lowered from open windows on to the cart, backed up on to the sidewalk, or were carried out in haste to be put across the shaft of what was called a chair, and hurried away for swiftest burial. * * * * In the thick of it, I find the names of our fellows. Through all those sad years, always ready, always dutiful."

Continuing, he said:

> "In that last great war we most of us so well recall, this college was true to its traditions. There are on our list to-day at least one hundred and four men who served their country in the field, in hospitals or at sea."

In 1863 the society moved into its present hall, corner Thirteenth and Locust streets. It is a large three-story brick building. On the first floor are the meeting-rooms and offices. The second story contains the library, which now numbers nearly 38,000 volumes and 20,000 pamphlets, and is second only to that in Washington. Forty-one years ago it numbered only a hundred volumes. The third story is occupied by the Mütter Museum, which is considered one of the most valuable and interesting collections in America.

After the close of the address a reception was given to visitors and citizens at the society's building. A collation and music were provided. The attendance was large. The halls and rooms were beautifully decorated with flowers and brilliantly illuminated.

On the following day a special meeting of the society was held. In an address, Dr. Stillé briefly outlined the work and growth of the college, speaking of its published transactions, the conservative part taken by it relative to the Code of Ethics and its action upon many matters of municipal, state and national interest. He mentioned that in 1842 the college framed the Code of Ethics, which a few years later was substantially adopted by the American Medical Association. He also alluded to the liberality of the Fellows in establishing the museum and library.

The president then conferred the honor of Associate Fellowship upon the following gentlemen, their names and record being announced as here given: Henry Pickering Bowditch, physiologist and statistician; David Williams Cheever, a bold and thoughtful surgeon, a teacher with the tongue and the pen; William H. Draper, the trusted consultant, the clinical teacher, the physician and writer; Robert Palmer Howard, clinical investigator, writer and teacher; Hunter McGuire, a surgeon distinguished in war and in peace, teacher of surgery, president of the American Surgical Association; George Cheyne Shattuck, clinical investigator, eloquent teacher, generous benefactor of medical and secular education; Nicholas Senn, investigator in surgical pathology; Theodore Gaillard Thomas, medical author, teacher, clinical investigator; James T. Whittaker, clinical teacher, physician and writer.

Dr. DaCosta welcomed the new Associate Fellows on behalf of the college. In the evening a banquet was given at the Union League, at the conclusion of which Dr. Mitchell read an original commemorative poem: "A Doctors' Century."

A doctors' century dead and gone!
  Good-night—to those one hundred years—
To all the memories they bear
  Of honest help for pains or tears.

Good-night! a century's good-night,
  To such as for our noble guild
Stood firm when death was in the air
  And fear all meaner bosoms filled.

To them that, like St. Christopher,
  When North and South were sad with graves,
Bore the true Christ of charity
  Across the battle's crimson waves.

Good-night to all that shining line—
  Our peerage—yea, our lords of thought,
Their blazonry unspotted lives
  Which all the ways of honor taught.

A gentler word—as proud as thought—
For those who won no larger prize
Than humble days well lived can win
From thankful hearts and weeping eyes.

Too grave my song—a lighter mood
Shall bid us scan our honored roll,
For jolly jesters, gay and good,
Who healed the flesh and charmed the soul,

And took their punch, and took the jokes
Would make our prudish conscience tingle;
Then bore their devious lanterns home,
And slept, or heard the night-bell jingle.

Our century 's dead; God rest his soul!
Without a doctor or a nurse,
Without a " post," without a dose,
He 's off on time's old rattling hearse.

What sad disorder laid him out
To all pathologists is dim.
An intercurrent malady—
Bacterium chronos finished him!

Our new-born century, pert and proud,
Like some young doctor fresh from college,
Disturbs our prudent age with doubts
And misty might of foggy knowledge.

Oh, but to come again and share
The gains his calmer days shall store,
For them that in a hundred years
Shall see our " science grow to more."

Perchance as ghosts consultant we
May stand beside some fleshly Fellow,
And marvel what on earth he means,
When this new century 's old and mellow.

Take, then, the thought—that wisdom fades,
That knowledge dies of newer truth,
That only duty simply done
Walks always with the step of youth.

A grander morning floods our skies
With higher aims and larger light,
Give welcome to the century new,
And to the past a glad good-night!

It was received with applause and cheers.

On the following days the college halls were thrown open to the public. To a person interested in medicine and medical celebrities this was a rare treat. A loan collection of portraits of medical men, numbering one hundred and three portraits, in oil, was a conspicuous feature. Many curiosities in medical books and literature were to be seen in the library. In the Mütter Museum, besides many interesting and curious histological and pathological specimens, there is a large fire-place and mantel which the college has just erected at a cost of $2,000. It is constructed of greystone, and is seventeen feet high and eleven feet broad. The fireplace itself is six feet high. Six marble columns with carved capitals support the mantel, and on either side of the shelf are the coats-of-arms of the city and college. On huge andirons, which are in keeping with the fire-place, a wood fire burned. The hearth is made of mosaics. At the top of the fire-place there is an oval of the Minerva Medica, and immediately below it a representation of the Æsculapian rod. It is considered one of the finest fire-places in the country. All in all, the college is a treasure-house of things pertaining to medicine, and one can't but wish that the profession in our "Queen" city might combine efforts to institute something of that nature. Besides being of great value to the individual doctor, it would give dignity and power to the profession.

H. G. MATZINGER.

LETTER FROM NORWAY.

BERGEN, Norway, December 3, 1886.

My Dear Doctor—From private reasons I have had the occasion to visit this old Hanseatic town, celebrated for its fish, its rainy weather and the hospitality of its people. I have not seen anything of the first on account of the second, the rain, which commenced as soon as I entered the bay and has continued since, with the exception of an occasional furious snowstorm. It is to be noted, that it never rains in Bergen, but it pours. Of the hospitality of its people I have had plenty of proof, and am able to testify to that point. The rain does not seem to affect the population unpleasantly. They are too accustomed to it; and, especially on Sundays, when all amusements, if any there be, are prohibited, you may see the streets and squares full of people with big umbrellas, standing and gossiping in the rain. An umbrella, I understand, is sacred in Bergen, and you might just as well try to borrow a man's coat as his umbrella. I have seen three things in Bergen which particularly attracted my attention: the road over the mountain; St. Jurgen's hospital, and the hospital for leprosy.

Some years ago the city bought in all the saloons, and has since maintained twelve places for selling liquor, six of which are for the wholesale trade, the other six being retailing saloons. There, and only there, can whisky be obtained, and only in such quantity as the city considers appropriate for the individual consumer. From the profits of the business the city has built a magnificent road over the mountain, 2,000 feet high, the common name of which is, not improperly, the Drammensœi, the whisky road.

St. Jurgen's hospital is centuries old, and is inhabited by about sixty old chronic lepers. On both sides of a large common hall small rooms are arranged in two tiers, each room containing a bed, chair and table, the whole in appearance not unlike a prison (*sit venia verbo!*) Every patient receives a weekly allowance of money, buys his own food and has it prepared separately in the kitchen, where everyone has a little pantry for himself. The government is republican, the patients electing one of their number as elder, and he having considerable responsibility and power over the rest.

The patients seemed as happy and satisfied as it was possible with the dreadful disease from which they suffer.

St. Jurgen, whoever he was, is the particular saint of leprosy from olden times, but is also consulted by the ignorant for other ailments, when the doctors fail to cure; and that, although he is never known to have helped anybody. A large wooden box stands in the hall, in which the supplicants for St. Jurgen's favor may put the money, without which they dare not ask his intercession, and the hospital may yet, in the nineteenth century and in a perfectly Protestant country, count upon several thousand crowns every year from this box. The hospital for leprosy, the Lungegaardo—hospital, is the largest in the world, and I had full opportunity of seeing and studying this dreadful scourge of humanity, and was received with the greatest politeness by its two attending physicians, Drs. Danielssen and Nichol, and by Dr. Armauer Hansen, the supervising physician for leprosy in Norway.

While in the middle ages the gallows were erected outside the walls of every city to hang every leper who dared to enter, large hospitals are now maintained to take care of these unhappy creatures. A new law has lately entered into force in Norway, by which the government has the power to force all lepers into the hospitals, but the opinions about its necessity seem to be divided so far. Leprosy has for years been on the decrease in Norway, from 2,113 cases in 1856 to 1,630 in 1879; possibly on account of the greater civilization and the better knowledge in the population of the disease and of the necessity of its early treatment, possibly on account of the isolation of the infected. The people commence to understand that the earlier the treatment is commenced the better is the prospect of recovery, or, at any rate, such an amelioration of the symptoms that it may be called recovery, till a relapse occurs.

The opinions of the leading physicians about the etiology have changed materially since Dr. Armauer Hansen discovered the bacillus lepræ, which is in appearance and chemical action exactly similar to the bacillus of tuberculosis, only a little smaller. He finds them in every case of leprosy, they being inclosed in the cells of the tubercles; he has been able to cultivate them through several generations in sterilized blood serum, but—the last proof is lacking yet—he has not succeeded in producing leprosy in animals by inoculation. Most of the scientists believe that the bacillus is the cause of leprosy, and, consequently, that this disease is contagious, although not in any high degree.

Dr. Danielssen, the Nestor of Norwegian physicians, on the other hand, is yet reserved in his allegiance to the bacillus. He calls the attention to the fact that tuberculosis very often occurs in leprosy, especially in the tuberculous form, and has shown that, when the tubercles in leprosy commence to disappear by emolition and absorption, not by suppuration, tuberculosis of the internal organs, lungs, abdominal organs or meninges, very often develops shortly after.

He is yet reserved in his opinion, but is inclined to consider the bacillus lepræ and b. tuberculosis identical; so much more, as the

Spanish bacillus lepræ is larger than the Norwegian, and as the slow incubation of leprosy, if contagious it be, has much in common with that of tuberculosis.

Of the two forms, lepra tuberculosa and lepra anasthetica, or maculosa, as Dr. Hansen would call it, as the anasthesia only is the result of a lepra nervorum and regularly is found in the tubercular form, too, the first is by far the worst. A patient with tubercular leprosy lives, on an average, nine and one-half years, with lepra maculosa eighteen and one-half years.

The appearance of these unhappy creatures, with fresh eruptions, curvatures and deformities of the extremities from necrosis of the phalanges, multiple ulcerations of the skin, defects of the nose, ectropion of eyes, which, in connection with the paralysis and atrophy of all the muscles of the face, gives them a certain appearance of a dead man, is horrible beyond expression, and when leprosy attacks the larynx, too, to crown the work, and tracheotomy becomes necessary, existence must, indeed, be beyond endurance. Melancholia is, too, not of infrequent occurrence. Many patients with the lighter form, lepra maculosa, occupy themselves with manufacturing different light articles, and as in this form the necrosis of the phalanges is especially prevalent, the visitor often wonders that they, with hands which look more like the talons of an eagle than a human hand, are able to make such nice and artistic things. The articles they are allowed to sell, after they have been thoroughly disinfected by heat.

I return from here to Denmark, to proceed in January to Edinburgh, from whence I expect to sail for United States in February. With greetings to friends in Buffalo, I remain truly yours,

HERMAN MYNTER, M. D.

LETTER FROM PERSIA.

OROOMIAH, Persia, Nov. 15, 1886.

EDITOR MEDICAL PRESS:

Dear Sir—It being impossible to carry on a surgical practice in this country without having the patients constantly under supervision, six years ago we obtained the funds (partly from generous Buffalo friends) and built a small hospital on the Mission College grounds, about a mile outside this city. It comfortably accommodates thirty patients. On an average, we have twenty. All cases are received, with the exception of those having contagious diseases. In the line of surgery, operations have been performed for cataract, for artificial pupil, and minor diseases of the eye, amputations, exsections and resections, caries, and necrosis of bone, for stone in the bladder; for fistulæ, vesico-vaginal, vesico-utero vag., urethral, anal, etc. The Persian would sooner die than have his arm or leg amputated, so we have been compelled to treat several severe cases of compound comminuted fractures by conservative methods, and have succeeded in saving the lives and limbs of all. I will briefly cite one case: October 30, 1885, admitted Thomas Nestorian, aged fifteen. Twenty-five days ago fell, while asleep, from a buffalo which he was grazing, striking left leg on a sharp rock, which fractured the tibia a little below attachment of lig. patellæ, baring the bone. Patient has no appetite, temperature 104°. Anæsthetized and made a thorough examination. Very fetid pus had burrowed considerably. Motion very perceptible at point of fracture, which was oblique. Fibula unaffected. Removed considerable dead bone in small pieces, evacuated the pus, cleansing wound thoroughly, and applied long plaster of Paris splint, with large fenestrum over wound. For ten days wound was dressed daily with carbolic acid solution and packed with oakum soaked in balsam Peru, iodoform ointment or camphorated oil. Temperature ranging between 100° and 106°. After this, lateral splints or box with sawdust were used, as better suited to the daily irrigations. Two months from date of fall, under chloroform, the wound was laid open. Quite firm union had taken place on outer and posterior aspect of bone. From inside and outside aspect, removed all carious and necrosed parts, preserving the periosteum as far as possible. This left about one-third of the thickness of the bone, making a cavity or hollow three and one-half inches long by one wide. From this time on, patient and wound did well. April 30, six months from date of admission, patient dismissed with wound filled and closed, with exception of small place where a tent is sometimes introduced. Two months later patient seen walking without a cane. Most of these cases have been long and tedious, but they have ultimately recovered, with good use of the limb. Necrosis and caries are very common troubles following accident or gunshot. Of the latter there are four now in the hospital. One man is shot through the lower third of femur; another through middle of humerus; in the third the bullet lodged in patella, and in the fourth it entered below external malleolus, passed through to other side, coming out in lower third of tibia. The two first cases met with the accident two years ago, so all I did was to remove sequestra and carious parts and attend to the partially anchylosed knee and elbow. The fourth case was shot three months ago; tibia and tarsal bones are well shattered. Ankle stiff; foot extended; toes strongly flexed. Admitted today.

In removing stone the lateral operation has always been performed. The thirty-seventh case, a boy sixteen years old, was operated on twelve days ago. Removed a hard stone weighing twenty grains less than two ounces. All of my cases have recovered, although all have not been perfectly cured. Four have incontinence of urine, and one a fistulous opening in perineum. This last has not come for treatment. The cases where amputation was allowed were: first, a boy whose femur was fractured, a part being removed, *i. e.*, broken at two points, the piece being partly driven out through the wound; second, third and fourth were for gangrene, which had followed the native surgeon's treatment of simple fracture of the leg. Splints an inch wide are used here and held in place by a cloth smeared with gum of the juniper tree. Since seeing Dr. J. J. Chisholm's article on the after treatment of cataract,* I have followed the method there described in three cases of cataract and one of iridectomy, and will add my testimony to its superiority over the former method. I shall hereafter always employ this method, as there are much less hyperæmia, photophobia and lachrymation.

J. P. COCHRAN.

IT HAS been fully demonstrated by Dr. V. C. Vaughan that the ptomaine announced by him as the cause of poisoning from milk and its preparations, and which he named tyrotoxicon (cheese poison) really exists. The doctor considers that the alkaloid is formed by some micro-organism. The special conditions under which it forms, and the proper treatment of the poisoning, have not been determined.—*Exchange.*

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*Medical Record, July 31, 1886.

Society Proceedings.

ERIE COUNTY MEDICAL SOCIETY.

The regular annual meeting was held in the rooms of the Young Men's Christian Association, Tuesday, January 11, 1887.

The meeting was called to order at 10.30 A. M., President Dorland in the chair.

The minutes of the semi-annual meeting, and of a special meeting, November 7th, were read and approved.

The Chairman of the Committee on Membership, Dr. T. M. Johnson, reported that the following-named gentlemen had made application, and were recommended for membership by the committee: Drs. George H. Westinghouse, E. J. Murphy, W. E. Jennings, Gustav Pohl, H. J. Hill, W. E. Robbins, E. M. Wetherill, E. T. Smith and E. T. Stevens.

Upon motion of Dr. J. C. Greene, the report of the committee was accepted and their recommendation adopted.

Upon motion of Dr. J. C. Greene, the regular order of business was suspended and the President's address was made the next order of business.

Vice-President Strong was called to the chair, and the President then delivered his annual address.

Upon motion of Dr. J. C. Greene, it was then voted that the address of the President be received with the thanks of the meeting, and be spread upon the minutes.

Dr. Storck, chairman of the Board of Censors, presented the following report:

REPORT OF THE BOARD OF CENSORS.

At the last annual meeting of the society the following resolutions were passed and referred to the Board of Censors:

1st. "That the board be instructed to determine whether a member of this society can join a homœopathic medical society and still retain his membership in this society; and whether he is liable to expulsion for such action."

2d. "That the board be directed to determine whether a member of this society dealing in patent medicines and nostrums can hold his membership in the society."

In regard to the first, the Censors hardly deem themselves competent authority to determine this question. We may say, however, that in this matter "the motive largely determines the morality of the act." If a member of this society, holding the diploma of a regular medical school, determins to join also a homœopathic medical society, he must have some motive or purpose in doing so, unless he commits such act in abberation of his mind. In this case, he could not be held responsible.

While your board deems such conduct of a member highly improper, and while there may be sufficient cause for disciplining him, we also have to admit that a member of this society has the legal right and the privilege to join other scientific societies like the Historical, Natural Science, or Homœopathic society, and still retain his membership in the Erie County Medical Society without being liable to expulsion for such action.

Howbeit, if such a case exists in our society, and the member—as charged in the resolution—should at the present time be of sound mind, his good sense and honor will probably dictate to him to resign his membership, but if he should not do so before the next meeting of the society, the Secretary should be directed to furnish him with a copy of these proceedings and demand his resignation.

On the second resolution, the board deems the question rather too vague for opinion. A physician pharmacist might do all named in the resolution without fault and without violating the by-laws and rules of the society. Many physicians advise and prescribe nostrums and patent or proprietory medicines, and many of the preparations of manufacturers of such medicines that are carefully supplied with labels and pamphlets, giving full directions how and for what ailments they are to be used as certain cures—are used by certain members of the profession, a practice which your board deems not only highly improper and pernicious but also very unprofessional. The Censors are of the opinion that when such *dealing* as stated in the resolution becomes an open and distinct medical scandal or heresy, it would come within the meaning of the term "unprofessional conduct."

If, for instance, a member shall undertake to cure incurable diseases, or urge such nostrums and proprietary medicines as infallible remedies—or in any way practice upon the ignorance and credulity of the people to them harm in body or estate; such practice or business carried on by a member would be justly considered "*unprofessional*," and constiute cause for disciplining him; whether it be sufficient cause for expulsion from the society—meaning expulsion from the profession—your board is at present unable to determine.

If in this case, as in the other, a member of this society has made himself guilty of such misconduct, and is at present still engaged in the unprofessional traffic in nostrums and patent medicines, he should feel in honor bound to resign his membership in this society; if not, direct charges should be preferred against him in proper form. EDWARD STORCK.

A resolution was passed some time ago by the society by which the Board of Censors was directed to inquire into the law that was passed before the medical law of 1880, a law which provided that no practitioner in a county can be a legal practitioner unless he is a member of a legally authorized medical society. This question has been before the New York County Medical Society, and the legal opinion there was, that the law was still in force, and was not nullified by the law of 1880. Relying upon that legal decision, so far, we did not deem it proper to incur the expense of legal advice in this locality; we deemed it unnecessary, as this decision is from very good legal authority in New York, and the legality could only be established by a decision of the courts if a proper case should be brought before them.

The board holds that the law that makes it obligatory for a practitioner in a county to apply to a medical society of that county for membership, within thirty days after his residence in that county, is still in force, and unless he does so and becomes a member of a legally authorized society, he is not a member of the profession in good standing.

Upon motion of Dr. Hopkins, the report of the Board of Censors was received and placed on file.

Upon motion of Dr. Hopkins, the report of the librarian was received and placed on file.

Upon motion of Dr. Ring, the report of the Treasurer was received and referred to the auditing committee.

Upon motion of Dr. Crego, the President then appointed the following nominating committee: Drs. Ring, Davidson, Storck, Folwell and W. D. Greene.

Dr. Lynde moved that the Secretary be instructed to send each member of the society a copy of the proposed amendments to the by-laws, that we may have time to consider them and be prepared to vote upon them at our next regular meeting.

The following officers, recommended by the nominating committee, were duly elected:

President—Dr. O. C. Strong.

Vice-President—Dr. J. D. Hill.

Secretary—Dr. William H. Thornton.

Treasurer—Dr. F. W. Abbott.

Censors—Drs. Edward Storck, H. R. Hopkins, W. H. Gail, P. W. VanPeyma, and Charles Wetzel.

Committee on Membership—Drs. T. M. Johnson, E. T. Dorland and F. S. Crego.

Dr. Strong addressed the society in a few well chosen remarks, acknowledging the honor of his election as President of the society.

Upon motion, the meeting then adjourned.

WM. H. THORNTON,
Secretary.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of November 4, 1886.

The president, Dr. Potter, being absent, Dr. Hauenstein was elected to the chair.

Dr. Davis read a paper entitled "A Surgical Operation." It appeared in full in the previous (January) number.

Discussion.—Dr. Park considered the surgeon's hands as the greatest source of danger in antiseptic surgery,—more so than the instruments. The hands, and especially the finger-nails, should be scrupulously clean. He alluded to experiments made by Kümmel, of Hamburg, who washed his hands in several antiseptic solutions and then made finger-marks on prepared gelatine plates, and in due time organisms were found. This observer found that green soap is the best for cleaning the hands. Dr. Park said that Maas made gelatine and agar jellies with iodoform, and found that organisms could grow in them. Men decry antiseptics because they only go through the form of using them, and forget the most essential part—cleanliness. No wonder their results are unsatisfactory.

Dr. Hebenstreit spoke of the importance of antisepsis and cleanliness in midwifery.

Dr. Bartlett was impressed with the multiplicity of antiseptics employed in surgery. Why so many? He thought that the bicloride of mercury should be all that is necessary; especially when the wound is hermetically sealed. He is opposed to the general use of cor. sublimate in gynæcological cases; he preferred hot water and turpentine.

Dr. Hinkel spoke of the difficulty of doing operations about the nose antiseptically. He employs a weak solution of carbolic acid after operating, and then closes the anterior nares with a plug of oakum well dusted with iodoform.

Dr. Davis, in reply to Dr. Bartlett's question, said that various antiseptics were used because each had its province according to its peculiar properties. Some are best for cleansing instruments, some for cleansing tissues, and others, because of their insolubility, were particularly good for dressings.

Dr. Park mentioned a novel method of dressing wounds, which consisted in covering the wound with a glass cup of desired shape and size in such a manner as to exclude the air. He thought it would never come into use because of its impracticability.

Under the head of voluntary communications Dr. Hinkel said that during his recent visit to Philadelphia he was much interested in the investigations of Prof. Osler in regard to the malarial germ of Laveran. He had the pleasure of examining several specimens of fresh blood from patients suffering from acute malaria. He described the process of obtaining the specimen. The supposed malarial germ is found both in the plasma and in the blood-cell. It is about one-fourth the size of the red blood-corpuscle and contains granular masses which undergo a so-called Brownian movement. A high power objective is required in these investigations. Prof. Osler made use of a $\frac{1}{12}$ immersion lens. The organisms present somewhat different appearances in the acute and chronic conditions. They are most plentiful about the time of the malarial paroxysm. Prof.

Osler had found these germs present only in well-defined cases of malaria, after extensive investigation in the wards of Blockley Hospital. They change in appearance and gradually disappear under the influence of quinia. Though Dr. Hinkel doubted the prevalence of distinct malaria here, he hoped that any member who might meet with a case would not fail to examine the blood for the organisms.

UTICA MEDICAL LIBRARY ASSOCIATION.

Reported by J. G. Kilbourn, M. D., Sec'y.

The regular monthly meeting of this Association was held at the residence of the President, Dr. J. H. Gloss, December 6, 1886.

Dr. George Seymour read a paper on "Malaria during Pregnancy," which appears on page 64 of this number.

Dr. Hunt reported a case of hare-lip in an infant six weeks old, in which he operated successfully.

Dr. Gloss presented the eye of a boy, aged twelve, recently enucleated, which four years ago had been penetrated by a pin dart. The pin passed through the center of the cornea and lens. A few drops of blood and pus were removed from the anterior chamber by an inferior section of the cornea. The injury was at once followed by total loss of vision, probably from detachment of the retina, which in the specimen was found pushed forward and symmetrically attached to the ciliary body, leaving the choroid exposed. Little pathological change in the membrane could be detected in the wounded eye. The lens had been completely absorbed.

After the discussion of these cases the Society adjourned till January 3rd.

Book Reviews.

A TEXT-BOOK OF MEDICINE FOR STUDENTS AND PRACTITIONERS. By Dr. Adolf Strümpell. With Editorial Notes by Dr. F. C. Shattuck. Translated by Drs. Vickery and Knapp. Pp. 981. New York: D. Appleton & Co. 1887. Buffalo: Ulbrich & Kingsley.

Twelve years ago the work of Niemyer was the best if not the sole representative of German practice translated for our use. Since then have appeared the colossal handbook of Von Ziemssen, the text-book of Eichhorst and now this new one of Strümpell's. As we peruse its pages we are struck equally by its author's modesty and his encyclopædic grasp of his subject. Thoroughly up with the times in pathology, in electro-diagnosis and electro-therapeutics, it is marvelously so for a German book—thanks partly to its American editor—in the matter of treatment. That its author is a not too ardent follower of Koch in his researches appears in many places.

He begins with the acute infectious diseases. While discussing diphtheria he gives the best resumé of the differences between croupous and diphtheritic inflammations which we have seen. Tracheotomy he says is never indicated by the disease itself, only by the laryngeal stenosis which is so often a serious complication. In many of the diseased conditions of the nose and naso-pharynx he does not ignore the benefit conferred by modern operative methods, but refers to the surgical works for their details. His discussion of pneumonia is very satisfactory. In no other work of its scope do we find so satisfactory information concerning diseases from the inhalation of dust. Arterio-sclerosis is satisfactorily described without the histological minutiæ. A separate title is made of phlegmonous gastritis. Anomalies of position and size of the viscera receive due consideration.

But it is perhaps in that portion of the book devoted to diseases of the nervous system that the merits of the work stand forth most conspicuously. Whether we concern ourselves with the lucidity of description, the summing up of the pathology of the various diseases, their differential diagnosis or their treatment, we find little to differ with, nothing to criticise and everything to commend. The same ground has never—in our estimation—been as well covered in the same number of pages. A long chapter upon the localization of cerebral disease, in which, after general discussion of the subject, each part of the brain is taken up in turn and its focal diseases rehearsed, is of itself worth the price of the book. The section closes with "neuroses without known anatomical basis."

In every respect we welcome this book in its English dress. Studied along with some such work as Brunton's on Therapeutics, each acting as a complement to the other, it will prove, probably—all things considered—the most satisfactory work of its compass now in the market. The translators have done well their difficult work and their diction is always happy and fluent. Dr. Shattuck has added a few short chapters on diseases unknown in Germany, such as dengue, sunstroke, etc., and has carefully revised the whole work. The publishers have made of the whole—as is their wont—a very presentable and comely volume, which though containing a thousand pages is not cumbersome.

DISEASES OF THE LUNGS AND PLEURÆ, INCLUDING CONSUMPTION. By R. Douglas Powell, M. D.. Vol. XI. of Wood's Library for 1886. New York: Wm. Wood & Co. Buffalo: J. H. Matteson.

Dr. Powell is so well known as one who may speak with authority on all matters pertaining to intra-thoracic complaints that we welcome a new edition of his former writings. In but few points is it open to criticism. The author has made a serious omission in ignoring all that can be done for chronic empyæma by modern therapeutic operations; he contents himself with incision. This omission comes not from a disparagement of surgery, however, since he devotes an interesting chapter to surgical treatment of lung cavities.

We wish he had also been more explicit concerning the pathology of fibroid phthisis; it is even to-day *so* hard to persuade men away from the belief that this is a *non*-tubercular form. That he is fully alive to the specific microbe is nevertheless shown by two excellent chromo-lithographs exhibiting characteristic appearances of lung sections and cover-glass preparations when properly stained. However, in the limits of one small volume it is impossible to crowd everything that one might wish.

DISEASES OF THE BLOOD AND NUTRITION, AND INFECTIOUS DISEASES. Vol. IV. of "A Handbook of Practical Medicine." By Dr. Hermann Eichhorst. Vol. XII. of Wood's Library for 1886. New York: Wm. Wood & Co. Buffalo: J. H. Matteson.

In this concluding volume are considered such diseases as scurvy, gout, diabetes, the exanthemata, rheumatism, malaria, typhoid, gonorrhœa, soft chancre, tuberculosis, leprosy, diphtheria, and zoonoses such as glanders, actinomycosis, etc.

Everywhere we see evidences of the author's wonderful powers of condensation, a great deal of information being often conveyed in a short sentence; a feature rare among German writers. While

Eichhorst everywhere states whatever may have been revealed by biological or bacteriological investigations he is always so guarded in his personal acceptance of such work that no one can accuse him of being an unsafe guide to follow. That he is a confirmed dualist in the matter of venereal sores appears from the mere sight of his classification. Evidently, too, he does not believe in the identity of croup and diphtheria.

As the successive volumes of this handbook have come to notice they have risen in our estimation; only in the matter of directions for treatment do they leave anything to be desired.

MANUAL OF OPERATIVE SURGERY. By Joseph D. Bryant, M. D. Pp. 530. New York: D. Appleton & Co. Buffalo: Ulbrich & Kingsley.

In its new dress, with a more liberal publisher, in extended and more comprehensive form, Dr. Bryant's Manual forms a most attractive and valuable work. Its opening chapters contain those general practical directions whose observance contributes so greatly to surgical success, and whose relevancy to that which follows should not be overlooked.

Under the head of ligature of vessels we do not see any notice of the plan of double ligature with section of the vessel between, a plan which has much to commend it. Bardenheuer's method of access to the innominate for purpose of ligation is not mentioned, although it would seem worthy of it in any work treating of the operation. Nothing is said of the treatment of varicose veins by injection of carbolic acid, which is much safer than the iron solutions that the author recommends.

In the operative surgery of the head and brain we are glad to see attention paid to the localization of function. Elongation of nerves and the bloodless stretching of the sciatic receive due mention, as does also nerve suture. The suture of tendons also is duly commended and described. In the excision of joints we are pleased to see the incisions which Langenbeck has described so generally advised by the author.

The chapters on amputations and on the relief of deformities are full and valuable; that on plastics as full as could be expected in a book of this size. It treats for the most part of plastics of the face. That portion devoted to the viscera is made more full by proper appreciation of the recent work of the German and Italian surgeons. This is the first work in English in which the reviewer has seen anything like proper recognition of Czerny's operation for the radical cure of hernia; an operation which he can not but consider the most effective of all that have been proposed.

Among the miscellaneous operations we are glad to note paracentesis of the pericardium, intubation of the larynx and laryngectomy. In fact, we note the omission of nothing which would interest particularly those for whom the work is intended, while everything which they need is not only tersely described but accurately portrayed by the figures, of which there are nearly eight hundred. In fact, in the lavishness of its illustrations as well as in its comprehensive terseness the work is probably without a rival among those of its class.

Publisher as well as author are alike to be commended and congratulated. It is a work which no one who aspires to do surgery can afford to be without.

BOOKS RECEIVED.

From D. Appleton & Co., New York, through Ulbrich & Kingsley:
  Manual of Operative Surgery: J. D. BRYANT.
  Text-Book of Medicine: A. STRUMPELL.

From Wm. Wood & Co., New York, through J. H. Matteson:
  Handbook of Practical Medicine. Vol. IV.: EICHHORST.
  Diseases of the Lungs and Pleuræ: R. D. POWELL.

HEKTOGRAPHS.—The material used for hektographs by the French Ministerium of Public Works consists of 100 grammes ordinary glue, 500 grammes glycerine, 25 grammes pulverized barium sulphate or kaolin, and 375 grammes of water. As a copying ink is used a concentrated solution of aniline water. In order to wash off the old ink without much loss of material, a little hydrochloric acid is to be added to the water, finishing with cold water, so as to remove the last traces of the acid. Especially the latter ingredient—the kaolin—is said to essentially contribute to the durability of the material.

NOTICE.

In order to make The Medical Press of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

For Sale.—Faradic Battery, in good repair. Address, Doctor E. C. Long, 1339 Main Street.

For Sale.—Good practice, with furnished office, in Tonawanda. Address, Doctor Henry Fritcher.

Gaultheria in Rheumatism.—At the New York Medical and Surgical Society, Dr. Flint stated that the results of the trial made of this substance in thirteen cases at Bellevue Hospital served to show rather better results from gaultheria that those which are ordinarily obtained from salicylic acid. The oil of wintergreen was the preparation used, and it was administered several times a day in ten-drop doses in flax-seed tea, which renders it less disagreeable to the taste and to the stomach. In some of the cases the alkaline treatment was employed at the same time. Dr. Ball stated that Dr. Kinnicutt had used the oil of gaultheria in a number of cases of acute rheumatism, with even better results than those mentioned by Dr. Flint. It was administered in milk, and was less disagreeable when so taken than salicylic acid or salicylate of soda.—*New York Medical Journal.*

Quillaia as a Substitute for Senega.—The *Centralblatt für Klin. Med.* says, according to the *Medical Record*, Nov. 7, 1885, that the two glucosides (the "two" are, some think, identical) which exist in senega root, and give to it its medicinal properties, are found to be five times more abundant in the quillaia bark. Dr. Kobert, of Strassburg, has therefore substituted soap bark for senega in the treatment of diseases of the respiratory organs. Its action as an expectorant appears, he says, well established, and it proves a more agreeable remedy than senega. Dr. Kobert advises the administration of quillaia in decoction made with five grammes of the bark to two hundred grammes of water (about 1¼ drachms to 6¾ fluid ounces). The dose for an adult is a dessert spoonful every hour, and for a child a teaspoonful.—*Chemical Gazette.*

The Medical Press
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THE ELECTROLYTIC CAUTERIZATION OF THE SURFACE IN THE TREATMENT OF LUPUS VULGARIS.

By G. Gärtner, M. D., Docent, University of Vienna, and Sigmund Lustgarten, M. D., First Assistant Dermatological Clinic, University of Vienna.

TRANSLATED BY ERNEST WENDE, M. D., B. S.,
For The Medical Press by Request of the Authors.

Of late, rapid strides have been made in the electrolytical treatment of skin diseases. The incitement in the main has been derived from American physicians. The indications for its use were mostly small new formations, as warts, for example, and likewise the permanent removal of hair. The method in vogue consists in puncturing the respective tissues with fine needles, thus securing the effect of the current.

The application of button or plate electrodes for this purpose was merely exceptional, although, for a long time, it had been known that cauterization might be produced in this wise.

Such electrodes were illustrated and described by Bruns*. He declared that it was no easy task to succeed, after this fashion, in deep cauterization upon a dry and perfect skin while the epidermis operated as an obstruction to the electric flow. The force transmitted during ten to fifteen minutes caused no perceptible change. It was only after a continuation of one-half hour to hours that an eschar was discernible, corresponding to the plate of the electrode. The epidermis was first removed with the aid of blisters or the hot iron, in order to hasten the result.

It is well known, that upon an ulcerated surface the alteration is more intense. This fact was recognized by Crussel* as early as 1841, when he showed that a feeble but a long uninterrupted current was productive of a vivid escharotic action, with the effect of transforming a bad looking ulcer into one bearing healthy granulations.

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*Die Galvanochirurgie, 1870.

Franz Groh† reported an occurrence of which he availed himself in the year 1851, to heal ulcerated sore feet by covering one-half of the ulcer with a copper plate, the remaining half with a plate of zinc, connected by wire. Consequently this pair of plates represented a simple galvanic element, having for its agitating fluid the secretion of the sore. After a duration of twenty-four hours, he discovered beneath the zinc plate a well-formed eschar.

Groh also undertook to carry out with electrolysis a superficial cauterization in a case of myxosarcoma of the leg. He filled the two existing ulcers with zinc filings, each receiving a current from six elements of a Daniell's battery. But later on, in continuing his treatment, he employed electro-puncture.

Neftel,‡ of New York, one of the most zealous advocates of electrolysis, utilizes superficial cauterization as an after treatment in tumors which have been nearly destroyed with needles.

A. D. Rockwell‖ recommends electrolysis as a curative agent in various cutaneous affections, as eczema, psoriasis, prurigo. He applies electrodes covered with flannel or linen, and at times without any covering. In these disorders, eschars are not permitted to form, as they are not indicated.

So has the electrolytical management of lupus been a subject of controversy. In the accessible literature at our command, it was a treatise by Groh§ that gave us the first information with regard to it. Both of his cases were lupus scrophulosus accompanied by the development of large nodules upon the upper lip, and in one instance there was also a lupoid patch upon the nose. It was accomplished by means of needles which punctured the diseased portions and transmitted the current.

It was but recently that Behrend demonstrated before the Berlin

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* Crussel: Ueber den Galvanismus. St. Petersburg, 1841.
† Groh: Die Elektrolyse, Wien, 1871.
‡ Neftel: Virchow's *Archiv.*, Bd. 87.
‖ Rockwell: *New York Medical Journal*, 1871.
§ l. c., page 38.

Medical Society two cases of lupus vulgaris treated with electrolysis. We are unconscious of the fact, whether electro-puncture, the method generally used for the removal of nævi and hair was employed, or some other, as he has withheld his results for a future publication.

We have failed to find any positive evidence of priority, in what has been written on the subject, to our method of treating lupus by the electrolytic cauterization of its surface.

Our knowledge of the matter was determined from observations occasionally and accidentally made during electro-therapeutic sittings; for, every now and then, escharotic disturbances were perceived beneath the negative electrode. The erosion generally underlying the periphery of the cathode was brought to view where the moist sponge or leather cover became thin from wear and tear, allowing the metal to come in contact with the epidermis. This caustic influence was undoubtedly brought about by electrolysis, depending on the one hand upon direct decomposition caused by the current, then, again, upon a further destruction due to the products of decomposition (secondary electrolysis). This is especially the case when an alkali is developed below the cathode.

In medical circles we often meet erroneous impressions associated with the importance of both of these factors. Many fancy, being misled by the term and by the recollection of the experiment that the current is capable of decomposing water, a tumor thus treated, at the end of a séance, no longer exists as such, but that a dissolution culminating in hydrogen and oxygen, acids and alkalies has taken its stead; when in reality but a small portion of the disturbed tissue has undergone a change. A current having an intensity of 1 ampère will decompose in one second something like 0.1 milligramme of water. In the electrolytic cauterization of lupus, as produced by us, currents exceeding the strength of 00.1 ampère=10 milliampère were not employed. The duration of a sitting was ten minutes. This current, within the given time, will well nigh decompose 0.6 milligramme of water or about the same amount of tissue. Certainly, at times the weight of tissue destroyed in one séance may be incomparably greater; therefore it necessarily follows that the destruction must still depend upon some other circumstance than the ones mentioned. Even in the beginning of the process, it is also evident that the separation of hydrogen and oxygen, the formation of acids and alkalies within and without the tissues must have a modifying influence upon them.

Yet greater significance seems to be attached to the subsidiary effects of electrolysis, the action of the so-called "ions," for in this manner the unlike results of both poles are ascertained. The negative exerts a much more extensive and deeper, more penetrating action than the positive. Undoubtedly the eschar found beneath the cathode, which bears a close resemblance to one caused by caustic potash, is mostly due to the secondary effects, and may be considered as produced by alkalies in a nascent state.

It is always possible to bring forth an eschar if, by selecting a bright metallic plate for the cathode and with the aid of the usual moist + electrode a current having an intensity of 5–10 milliampères is passed through the body. A previous moistening of the epidermis was not necessary in our experiments.

Yet Bruns, under similar conditions, saw no eschars form; this was owing, as a matter of course, to a want in the proper intensity of his current. An appliance for measuring its strength was not introduced into the circuit, hence it could be easily overlooked and it was also probable that the batteries employed by him were incapable of producing a current of sufficient strength to overcome the first resistance of the skin.

A galvanometer carefully graduated to indicate the absolute intensity of the electrical force transmitted should be used in all forms of electrolysis, because it is under the control of such an instrument that a certain effect to be produced may be predicted beforehand. The assertion that so and so many elements are requisite to cause this or that appearance is quite inadequate, for under existing circumstances the changeable resistance of conductors, with limits of great variations, is not taken into account.

It may readily happen that the intensity of the current, upon which everything depends, with the same number of elements, may in one case be three times as great as in another. There is no question of doubt as far as we can see, if this judicious requirement has been fulfilled, that but few disappointments and failures would occur. To work without a galvanometer is like groping in utter darkness.

For our purpose a relatively simple instrument will answer. It must not be unnecessarily sensitive nor entirely obtuse on making or breaking of the current. The current-balance (stromwage) recently advised by Kohlrausch is especially worthy of recommendation on account of its simplicity in construction, and its moderate price. Of course those physicians who possess Edelmann's or some other reliable instrument will need no other.

We have also added another precautionary measure which may be found of equal importance in the various electrolytic trials. All the cells of a powerful battery are intercalated and the current regulated with a *graphiterheostat*, recommended by Gärtner. It possesses, among the many admirable points, the very important advantage of avoiding the too painful sensations due to the sudden variations of the current. For, besides the resistance of the body, which, under the influence of the current and eventually through the destruction of the epidermis, undergoes great changes, there is inserted into the circuit a resistance of greater persistence and thus in the most simple manner a stable equilibrium of the strength is established. It is rarely, if ever, necessary to interfere with the rheostat during one sitting—whereas in using the selector or element numerator corrections are continually required. The gradual wear and tear, the means of preserving all the elements, is another advantage offered by the rheostat. In long and frequently repeated sittings its employment is well worth considering. The eschar arising underneath the shining metal of the cathode will never wholly correspond to the surface which it covers, provided the duration and the intensity of the current are within the above-mentioned bounds.

Disseminated amidst the normal skin we find circumscribed, generally speaking, circular escharotic patches. They are promiscuously distributed over the entire hidden surface. Yet below the rim of the electrode, the distances between them are pretty regular, so that a corona of eschars marks the position of the wheel-like cathode.

This irregular cauterization can be sufficiently explained by physical laws, as there are points on the skin showing a less resistance towards conduction than its adjacent parts, and, as a natural consequence, the local strength, the density of the current is more intense at these bearings, producing here a more energetic electrolytic action. The horny layer of the cutis over these *punctæ minoris resistentiæ* is soon broken up and finally dissolved by the development of alkalies, again increasing the conductivity and density of the forces transmitted. Here the cauterization is deep and may involve the entire thickness of the skin, while the neighboring structure remains intact.

The corrosive action at the edge of the cathode is occasioned by frothy drops of a strong alkaline fluid, which, by the development of gases, is forced towards the border of the plate, where they bubble forth, causing a slight separation and swelling of the epidermis. These points again more easily favor the entrance of the current, and the upshot thereof is a further erosion.

If, under the electrode, there exists, in connection with the normal skin, excoriated patches, or such having a thinner or more succulent epidermis, then these alone will be the ones affected. Should a plate electrode be placed over the surface of an ulcer entirely covering its periphery, the current in its passage would only cauterize the sore. The normal epidermis, by keeping back a density sufficient to penetrate the sound tissue, would protect the immediate vicinity.

For the same reasons the lupus papules found scattered throughout a portion of healthy skin are only destroyed while the sound adjoining tissue almost always remains unscathed.

Upon this fact, backed by a number of experiments, our investigations have been based.

At the outset we had an annoyance to contend with. While below the surface of the electrode itself, only the lupus papules were attacked, yet at its edge the benign epidermis was also implicated, giving rise to the corona of eschar previously alluded to. Considering the overflow of frothy drops at the periphery as the cause of this undesired result, we attempted the removal by the introduction of an ordinary layer of thin linen between the electrode and skin, with the hope that the developed fluids might be absorbed. The result compared but incompletely to our anticipations. There would still appear, although in an isolated manner, eschars about the periphery, and, besides, the caustic effect of the current was generally interfered with by the interposition of this moist layer. So that in order to procure the required end it was either necessary to prolong the sitting or to increase the current.

Later, our work, on making the edge of the metallic plate non-conducting with a coat of lac, has been more satisfactory. This prevented the current from coming in contact with that portion of the epidermis where the drops appeared and cauterization at the border ceased.

After a while we substituted for the much less uniform pellicle of lac, an ebonized ring, its lower surface on the same level as that of the plate.

This appliance can be held *in situ* either upon the extremities, rump, neck or on many regions of the head, with the aid of a fixable electrode devised by Gärtner. The anode may be fastened in a like manner. Through this fixation, you not only secure a freedom of your hands but an invariably safe and firm adaptation to the parts, being a most important feature if a thorough cauterization is to be expected.

Electro-puncture is generally painful. It is always aggravated when a sudden change is wrought in the intensity of the current, as, for example, on closure and opening of the circuit. The sensation does not wholly pass away even during continuous transmission, and may only be modified by gradually increasing its strength as recommended by so many.

The operation will be absolutely painless, if the same precaution be used in the electrolytic cauterization of the surface. Some patients do complain of a slight burning, while others experience nothing at all. So far as we are aware this is the only method of cauterization by which a tissue richly supplied with sensory nerves can be painlessly destroyed. Just how this takes place is very remarkable, and difficult to understand. Probably the essential feature, the painless destruction of the nerves of sensation and of the tissue *en masse* is owing to an anæsthetic influence of electricity.

In short, the entire procedure of the superficial cauterization of lupus may be thus considered. Any powerful battery to generate the electricity may be employed, a twenty-four-celled Leclanché, or a similar number of chromic acid elements, all of which are to be brought into activity. The positive pole should bear a sponge electrode having rather a large surface. The most preferable form is Gärtner's fixable electrode, which is to be fastened to the forearm of the patient. From the zinc pole the current should be transmitted through Gärtner's rheostat and an accurately graduated boussole to the cathode; the surface is to be slightly arched with a fine plate of silver of about two centimeters in diameter, enclosed by a hard rubber ring. This, too, may be fastened with a fixable electrode to the diseased portion of the skin. If the local conditions are such as not to permit this application, as in the case of parts which are strongly curved or over projecting bones, then they are to be held, with uniform pressure, in position by hand during the sitting. In order to remove all fatty matter, we must not forget to thoroughly wash the part to be treated with spiritus saponatus alkalinus or some good soap, before applying the current. Having the electrodes in the desired relation, you pass through the rheostat, which has up to this time completely interrupted the flow, a slowly increasing and uniform current of five to eight milliampères. The patient will experience only a slight twitching or burning, owing to variations.

A ten minutes' continuation of a steady flow is barely perceptible, no pain whatsoever being induced, despite the relatively large amount of tissue destroyed in the meantime—nor is suffering following the application ever complained of. In due time the electric transmission is cautiously interrupted and the cauterizing plate removed. In the majority of cases the electrical cauterization of the lupoid tissue is complete. The normal and cicatrical tissue between the infiltrated lupus papules remains uninjured. Here and there sound structure, too, may be involved, and this is especially true when the relation existing between the healthy and the diseased is greatly in favor of the former, as when the superficial cauterization of a lupoid patch one-half the size of a pea on the trunk or the extremities is concerned; but in lupus of the face it is barely worth consideration. The cauterized lupoid patches appear excoriated and swollen. For a moment there oozes from them a clear tenacious fluid of an alkaline reaction. Within a few hours they dry up, sink in, correspond to a deep destruction below the normal niveau, and are covered with brownish, leather-like crusts. These, as well as the entire cauterized surface, remind one of the caustic action of potash. They may be advantageously dressed with iodoform, the treatment to be kept up until the crusts fall off, which generally occurs within eight to fourteen days, depending on their tenacity. Repair in most cases occurs aseptically, no pus being formed. Those spots or patches kept deep by the tenacious tray-formed eschars, after falling off, fill up and give rise to cicatrices which are smooth, tender and pigmented for some time to come. It is possible for some to escape the effect of the current in one sitting. Although self-evident, yet we have never seen any unpleasant symptoms arise from a longer application to the body, the head excepted.

Thus far our results are based upon the treatment of ten patients affected with lupus vulgaris, seated upon the face and upon the extremities, flat and papular in form, and partly in nervous and erethistic individuals. No known method of treatment answers exclusively for the peculiar behavior of lupus, with its variation of forms, with its subsequent advances and relapses extending over years. Nevertheless, we have seen that the proposed mode of management has a just claim, and its sphere of usefulness seems to be worthy of notice. It is indicated in all such forms where the preliminary conditions, the better conduction of the pathologically changed tissue, are of value for electrolytic cauterization. This is especially true where the lupoid infiltration has neared the exterior of the skin. As a matter of course, if the lupus papules, disseminated throughout the leathery cuticle otherwise normal, lie very deep, or if they still are located in subcutaneous tissue appearing as complications, then it will be of no avail. But the above conditions being fulfilled, its employment is possible where the relations are such as to admit of a ready adaptation of the electrode. This is the case in the flat, also in certain papillary forms, as well as in lupus exulcerans. It is necessary to get rid of the accumulated mass of epidermis through maceration, followed by a thorough cleansing with soap, in the papillary variety of the extremities, which are so frequently accompanied with exquisite verrucas; if not, they are to be excluded.

Concerning an ulcerated lupus, we may state that cauterization is not as painless, and especially at the commencement of the process, as when covered with a layer of epidermis. Here several applications of a five per cent. solution of cocaine is sufficient to produce complete anæsthesia of the part.

It is well known that such evil effects as collapse, anæmia of the brain, and dizziness frequently follow galvanization of the head. This has induced us to pay extra attention while cauterizing the face. Thus far in this particular we have had no case to record. Temporarily, now and then, a slight dizziness may occur, which should be a warning to avoid the too great fluctuations from disturbing the brain by a very careful and gradual increase in the intensity before the individual reaction is tried.

It is found, on comparison, that the electrolytic cauterization of the surface, owing to its selective power and on theoretical grounds, equals the methods usually employed, and in being free from pain it surpasses them. Like other methods, it is not always indicated, and one application will rarely suffice to entirely heal the local disease. Compared as a drawback to other means, may be added the greater length of time and the large size of the apparatus required. In the aggregate, we believe to have a right to the acceptation that the electrolytic cauterization of the surface in such an insidious and wearisome process as lupus really is, the treatment of which demands frequent operative measures, will be of practical importance.

In conclusion, we wish to express our thanks to Prof. Kaposi for his support and the interest he has manifested during our investigations.

ANOTHER PROLIFIC MOTHER.—Referring to somewhat similar cases reported by Drs. Long and Morris (MEDICAL PRESS, Vol. I, Nos. 2 and 4), Dr. R. E. Moss, of Gowanda, writes: "I delivered a woman in her second labor of a full-term child just 298 days from her first labor, and in a third labor I delivered her of a full term, ten-pound child, just 320 days from her second labor, this making three children born at three different labors in 618 days. If any one knows of a more prolific soil, I would like to know where."

LACERATION OF THE CERVIX UTERI, WITH SPECIAL REFERENCE TO ITS PREVENTION.

By J. R. McCarthy, M. D.
Tarport, Pa.

[Read before the McKean County Medical Society, October 5, 1886.]

The frequency of this accident was noticed by many of the older obstetricians. Mauricen, in the seventeenth century, collected the literature on the subject, and showed that it was not only known to be of frequent occurrence, but that its pathology also was known. Little attention was paid to it, however, until 1851, when Sir James Y. Simpson again called attention to its frequency, and brought it more decidedly before the profession. Others took notice of it then, and its pathology became well understood. But it was not recognized as an important factor in causing uterine disease until 1862, when its importance was discovered by Emmet, who instituted the remedy that overcame the difficulties, the operation that has so worthily taken his name; which, after proving its efficacy, he gave to us in 1869. He made one of the most important of the many advances in gynæcology that has been made in the last twenty-five years. It has relieved many hundreds of women of extreme suffering, from maladies that had resisted all other treatment, and restored them to health and to happiness. That Emmet's operation has been overpraised by American practitioners, and that it has been many times resorted to unnecessarily, should not in the least detract from its real merits; it should simply make us more careful in resorting to it. Our trans-Atlantic brethren, however, while they have admitted the importance of the lesion, have, as a rule, underrated the efficacy of the operation, and have been slow to accept it as a remedy. While it has some warm advocates among them, many have even strenuously opposed it, as an innovation that was irrational and inexpedient. No less an authority than Henry Bennet, of Nice, to express his opinion of its absurdity, accused one generation of slitting up the cervix, and the next of sewing it up. Many others repeated the accusation, not recognizing the fact, or blinding themselves to it, that the conditions in the two cases were radically different, that the tendency of the impregnated uterus is to heal quickly when wounded, while the parturient uterus is in a state of fatty degeneration opposed to healing. They should be aware that no one assumes that the laceration itself, unless it opens one of the cavities, does the harm; the mischief comes from its remaining unhealed, hence the indication for treatment.

PATHOLOGY.

Laceration of the cervix, occurring as it does at a time when the uterus is in a state of fatty degeneration, the tissues undergoing that disintegration incident to involution, happens at a time when healing is contra-indicated; for the process of repair and the process of disintegration are directly opposed to each other, consequently healing cannot take place as in the nonparturient uterus, and would be the more retarded were it not that the vital forces are such that when they are not interfered with by former disease or too extensive a laceration, involution may be held in abeyance, while repair goes on and restores, after which involution will resume its duties and finish its work. Unfortunately there is not always this balance of power. The hyperemia that brings a sufficient supply of blood to effect repairs of course retards or arrests involution for the time, but it does not always stop at this, for the proliferation of cells incident to repair may be such as to cause an actual hypertrophy, which may, from the increased weight it brings, produce more inflammation, and cause the inflammation to become excessive.

In the lateral laceration, where it extends to the vaginal vault or beyond, the flaps will be drawn apart by the ligaments, which are attached anteriorly and posteriorly to the external membranes; a tendency which is made greater by the increased weight of the uterus, which settles down and causes the internal parts, which are unsupported, to settle down still further and obtrude the internal membrane, which rolls out and pushes the flaps still further apart, and this divergence is still further increased by the posterior lip being pushed against the posterior vaginal wall and held back, while the anterior lip is forced down the axis of the vagina, thus persistently keeping the flaps apart. For these reasons lateral lacerations heal much less rapidly than any others.

Lacerations of the anterior lip, as a rule, heal readily, since the traction from the ligaments is not so great but that the pressure from the opposing walls of the vagina is able to keep them in opposition.

Lacerations of the posterior lip also heal readily, for the reason that the flaps are kept in opposition by being pressed against the posterior vaginal wall.

When the flaps have become everted, an erosion generally commences, either at the torn edges or at the angle, and will sometimes spread so as to cover the whole abraded surface. This erosion has erroneously been called an ulceration, but it is nothing of the kind, for there is no destruction of tissue. In time the inflamed follicles undergo cystic degeneration and will become destroyed. The tissues at the angle become hard and gritty, so that they grate under the knife. This induration, as a rule, extends some distance beyond the angle, forming a mass, that Emmet calls cicatricial tissue, and he says this "cicatricial plug," acting as a compress, interferes with the circulation, and also with the action of the nerves, and is the cause of many of the derangements, neuralgias, &c. Dr. Wylie does not accept Emmet's theory. He says this is simply close, firm muscular fiber, perhaps somewhat hardened by hyperplasia of the connective tissue, and that it is not cicatricial tissue; that cicatricial tissue is always superficial, that a scar is always thin. Consequently the mass is not cicatricial tissue. Be this as it may, the hardened mass is generally there, and that it acts as a compress and, to some extent at least, exerts the baneful influence that Emmet claims it does is quite evident.

ETIOLOGY.

The great factor in causing lacerations of the cervix is parturition. The most frequent of the predisposing causes are induration of the cervix, and cervical catarrh. When the usual softening of the cervix of the last few months of pregnancy does not take place, the fibrous tissue remains hard and inelastic, and will not stretch readily, so that if the expulsion force is great during labor, it is likely to tear. Consequently, in premature labors, when the cervix is still elongated and hard, the accident is more likely to occur; in fact, the proportion of lacerations from abortions is much greater than at term, and in criminal abortions the cervix seldom entirely escapes.

Lacerations frequently occur in young women with feeble organizations and imperfect development, especially among those who have been subject to bad hygienic conditions, whether among the poor who have been underfed and overworked, or among the well-to-do who have been kept at school continuously and too closely confined to their studies, overworking the mental at the expense of the physical, and at the same time not having proper nourishment, either from want of appetite or from improper selection of food.

The most annoying predisposing cause is cervical catarrh, for it causes the parts to lose strength and elasticity; in fact, I cannot express so well the condition the fibers are in as to say they seem half rotten, for they will sometimes give way in otherwise abnormal labors. Any abnormality of the cervix or adjacent parts may prove to be a cause, whether from previous disease, displacements, induration or atrophy.

Most writers assert that lacerations are caused more frequently from tedious labors than from rapid ones. My observations, which have been taken from recent cases, and in my own practice, have been otherwise. In tedious labors the fibers tire out and lose their elasticity; and when the head presses a long time at the brim, and still more when it becomes impacted, the cervix, from being compressed, has its circulation interfered with, so that it will become disorganized and œdematous, sometimes to the extent of sloughing, and at all times to an extent that causes it to tear more easily, and it also brings it to such a condition that it will not heal readily when torn.

In rapid labors the pains may come on so quickly and so forcibly that the cervix does not have time to dilate, and is obliged to tear. In this case the tissues have not become bruised nor disorganized by pressure, and are in a condition as favorable as possible for healing.

The labor is more likely to be rapid when there is a roomy pelvis, or the head is small, or where there is a footling presentation, since the resistance below will be comparatively less than the *vis a tergo*. Another cause of rupture is delay of the child's head at the perineum. The contractions usually become stronger when the head arrives at this point, and the cervix being kept longer on the stretch, the fibers tire out and give way.

When forceps are applied before the cervix is well dilated, and too much force is used, a laceration may be produced.

PREVENTION.

Lacerations of the cervix are to a considerable extent the outcome of fixed laws and conditions, and can with some degree of cetainty be anticipated and guarded against. The obstetrician who has the care of the patient during gestation, can so manage the case that the accident scarcely ever need occur. Or, if he is not called until labor has commenced and he finds the predisposing causes present, he can still do much to avert the catastrophe. No one should be permitted to take charge of a case of obstetrics who is not qualified. And he who will give large doses of ergot, or use other means to unnecessarily hurry a case, before the cervix it sufficiently dilated, should be held for malpractice. People should be educated to the importance of the subject in all its bearings. We cannot urge too strongly upon them the importance of the correct education and training of girls when they arrive at the age of puberty. The girl should be taught that she is about to become a woman, and what it is to become a woman. She should be taught how to take care of herself and the importance of doing so. It should be impressed upon her mind what she is the most likely to pay immediate attention to, and that is, if she wishes to become a beautiful and attractive woman, she must be a perfect woman physically; and that to be well and strong and bright she must be physically well, especially in her sexual functions. That any violation of these rules will not only bring ill-health with all its incident pains and aches, that will make life miserable, but will make her look prematurely old and unattractive; that she will become scrawny and ill-tempered. The mother cannot be too careful of her daughter at this time, when the girl's whole future is depending on how she gets through this period of life. The mother is a disgrace to womankind who is so ashamed of her sex that her mock modesty restrains her from giving proper instruction. The girl should be made to avoid everything exciting, parties, late hours, and too close attention to studies. In fact, the exercise of psychical force should in no way be such as to draw on what is needed to establish the physical. When the mind is kept continuously in an excitable condition, the nervous organization becomes deranged and the whole system suffers, the vital energies are used up in the nerve waste before the physical parts receive their supply, resulting in imperfect development, especially of the genitals and particularly of the uterus, which is likely to have an elongated and hard cervix, and may have displacements. It is among school-girls of this class we so often find the pin-hole os. These conditions contra-indicate pregnancy, but when those possessing them become pregnant, we may expect trouble.

Among the predisposing causes that can be removed or controlled are displacements of the uterus, cervical catarrh, and induration of the cervix. If there are displacements, correct them, and if it is necessary to use means to keep the uterus in place, use a supporter. It should be so adjusted that it will not cause any unpleasant feeling, or it may do serious mischief. Treat the catarrh locally and, if need be, constitutionally. If there is any leucorrhœa whatever, and it remain for any time, attend to it. Some cases will yield simply to injections of hot water; others may need astringents additionally. Should the flow be irritating, first use a weak solution of chloride of lime, and afterwards resort to astringents, fluid extract hydrastis, fluid extract pinus Canadensis, fluid extract hammamelis, according to the case. These extracts can be obtained colorless and are quite efficacious. If the catarrh continues after this treatment, resort to the speculum, and apply Churchill's tincture of iodine, or iodine, carbolic acid and glycerine. I have found iodoform and glycerine on a pledget of cotton placed against the os to be sometimes of benefit. If the patient is badly nourished and anæmic, give her proper food and give her iron, and the bitter tonics. I avoid giving a pregnant woman the phosphates, or the lime salts, or food containing them. I wish to avoid giving her bone-making material, that the bones of the child's head may not be strongly ossified. This object can be obtained by keeping her on a diet of flesh and fruit, as near as possible. The child's cranium will not only be softer, but her own parts will be strong, elastic and dilatable, the pains of child-birth will be very much less, there will be fewer bad results to the mother, and it will be safer for the child.

Do not allow yourself to overlook an induration of the cervix.

In the persistent vomiting of pregnancy you will almost invariably find it present. Dilate the cervix carefully, and you will cure the nausea and remove the induration. There is less danger from the dilating than from the irritation that will remain, if you have the induration alone. If there is the least reason to suppose there is anything wrong in the last months of pregnancy of a primapara, make an examination and satisfy yourself that all is right, or is made right. It should be done even with the pluripara. If the usual softening of the cervix is delayed, use means to bring it about. A tampon saturated with glycerine and pressed against the os for a few times, will often be all that is necessary; if not sufficient, however, use hot water injections additionally, and occasionally dilate the cervix carefully.

When called to a case of labor, diagnosticate your case as early as possible. If there should be any abnormality, attend to it as soon as possible. If the pains come on suddenly and with too great force, give morphia or hyoscyamus, or both, or give chloral; remedies that obtund the pain and cause relaxation, while at the same time they will lessen the force of excessive contractions. If the labor is too rapid from any cause, retard if necessary with the hand.

Always be sure that the parts are well lubricated, and especially in dry labors. Use plenty of vaseline; it will not only act as a lubricant, but will keep down inflammation. When the pains are irregular and insufficient, a small dose of ergot will often give tone and regulate. If the patient gets tired, and the pains lessen in force, a dose of morphia will often relieve the irritation and give a little rest, after which the pains will come on more regularly and the case will come through all right. If the delay is the result of inertia, and it does not respond to a few small doses of ergot, combine with quinine, or strychnia, dilate the cervix as you can with the fingers, and as soon as they can be applied adjust the forceps. Do not give ergot until you get its continuous effect, for it will be damaging. I prefer the early use of the forceps, by all means, when by taking plenty of time and simulating natural labor, no damage will be done; on the contrary, you will bring the case through safely, where otherwise there might have been a laceration, and besides you will save hours of suffering.

Where there is much irritability and nervous excitement and a hyperæsthetic condition of the cervix, the patient is likely to soon tire out and the case becomes tedious if not properly managed. As soon as the pains begin to flag, give morphia, and if this does not very soon have the desirable effect of relieving the irritation, give chloroform. It will relieve the irritability, and in this way give tone to the pains, so that there will be no further trouble.

If the perineum is rigid and unyielding, don't wait until the child's head is pressing against it, but dilate with your fingers and use lubricants freely; and when the head approaches the perineum have your hand in the vagina, so that the back of the hand will be pressed against the perineum, then with your efforts you can so assist in the dilatation that you will be able to get through with safety, where otherwise the head might have been detained until the cervix was torn and the perineum ruptured.

Sometimes the anterior lip will be caught over the head, and dragged down. When this is the case, carefully draw it back, a proceeding which is safe when the fibrous tissue is firm, but when it is soft and inelastic from cervical catarrh, the greatest care must be taken, or you will assist in the rupture. When in this condition, I have repeatedly felt it give way when I was doing all I could to protect it. Apparently, the muscular fibers would give way first, then the mucous membrane would stretch out very thin and finally part. In such cases, retard the labor if possible, use lubricants freely, and try and coax that portion of the cervix back.

SYMPTOMS.

The only direct symptoms of laceration of the cervix, if we except hemorrhage, is pain. All other symptoms are indirect; they arise from the sequelæ, which are numerous, and are sometimes serious.

If there is a persistence of hemorrhage after the placenta is delivered, it can be inferred with almost absolute certainty that there has been a rupture of the cervix, providing that we can feel satisfied that there is no rupture of the perineum, or of the vaginal wall.

General symptoms are not likely to appear with much force until after laceration is through, or menstruation has commenced. There will be a feeling of malaise, an inability to stand with comfort, a lumbo-sacral pain, a dragging pain in the region of the ovary, or a stabbing pain will sometimes start from the ovary and extend over the whole of that region, and become very intense; a pain low down in the pelvis, either at rest or on taking exercise, but increased on sitting down, or on making a quick motion, and of an intensity only equalled by that from malignant disease. There will be nervous irritation and, what naturally follows, impaired nutrition and anæmia; also headache and neuralgia.

Any or all of these symptoms may be present, but it must be remembered that these are symptoms of the sequelæ, and that many of them can be present from conditions that are possible when there is no laceration of the cervix.

DIAGNOSIS.

A laceration of the cervix will be overlooked by those unacquainted with it, since the fissure, as a rule, cannot be felt and cannot be seen, on account of its being so often obliterated by the eversion of the flaps. Yet there are certain points, especially in a bilateral laceration, that make it easy to diagnosticate. One is, by the touch. On running the finger around the cervix, at the vaginal vault, there will be felt an apparent constriction, on account of the circumference there being actually less than it is below, where the flaps spread out and form a kind of flange. Another is by inspection, aided by the speculum. Take two tenaculums, seize one lip with the one, and the other lip with the other, and it will be found that they can be rolled together, so that the eroded surfaces can be made to disappear. These are distinctive signs; for in simple subinvolution, or in hypertrophy, the constirction will not be there, nor will nor can the lips be rolled together.

On examining by the touch, the cervix will be found to be large and soft and have a peculiar velvety feel; and the enlarged mucous follicles can be felt under the finger like shot. The fissure cannot be felt even in unilateral cases, or where but one lip is torn; except in rare cases, when there is hardening only at the bottom of the fissure.

On resorting to the speculum, there will be seen what appears to be an enlarged cervix, with enlarged Nabothean glands, and the erosions, the so-called ulcerations. The tenaculums will soon decide as to whether this cervix is as large as it appears. Where only one side is torn, that side will appear abnormally short, providing the uterus is in place; consequently you must satisfy yourself that the uterus is in place before this sign is of value.

Sim's speculum is the only one that can be used to advantage to make a diagnosis; since it is generally impossible to detect a laceration with either a cylindrical or a bivalve speculum, on account of their keeping the parts too much on the stretch.

TREATMENT.

When there are no symptoms, there are no indications for treatment, no matter if the tear be extensive. Sometimes the symptoms will yield to therapeutic treatment, and when they do, this is sufficient; but when they do not, it will be necessary to resort to surgical means to obtain relief.

In recent cases, where there is much hemorrhage, unless the rupture is slight, it is advisable to operate at once; since stitching it together will control the hemorrhage. It generally heals by first intention at this time and is not difficult to operate, on account of the relaxed condition of the parts, which allows the uterus to be drawn down easily, and the soft condition of the cervix, which allows the easy insertion of the needles. The subsequent treatment will be similar, whether the operation is performed or not. To control the hemorrhages, use injections of hot water; and as soon as it is controlled, and the condition will permit, apply iodoform to the wound, which will, for the time, be all the disinfectant that will be needed. If the flow is not great, a suppository every two or three days, containing iodoform, will be all that will be needed; but if there should be considerable flow, use disinfectant injections. What I prefer is the biniodide of mercury, one to four thousand. Use only enough to keep the vagina washed. I am opposed to the frequent injections of large quantity; it is not necessary; it disturbs the patient, and in that way does harm. The lesser quantity, used once or twice a day in the more severe cases, with absolute external cleanliness, is practically antiseptic. The patient should be kept in a recumbent position for two weeks. Her bowels should not be allowed to become constipated, and she should be kept on a nourishing but easily digested diet. After a month or six weeks, make an examination with the speculum, and if the laceration is found to be unhealed, and extends beyond the vaginal vault, it would be better to operate without further delay, unless there be found to be sufficient erosion or inflammation to contra-indicate.

In chronic cases, the indications for surgical treatment are when the various neuroses, the nervous irritation, cephalalgia, neuralgia, lumbo-sacral and pelvic pains can be traced to the laceration as a cause; when there are extensive erosions, ectropium, cystic degeneration of the glands, or persistent cervical catarrh, or where there is hereditary tendency to cancer. It may be said that laceration of the cervix will not produce cancer. This may be admitted, but the fact remains, notwithstanding, that on a raw and continually irritated surface, where there is a decided, low condition of vitality, malignant disease is more likely to occur than it would otherwise, and especially where there is already a tendency to it in the system. And I am confident that there is many a woman who has suffered from this dreadful disease, and of course died with it, who might have escaped, had her cervix not contained a nidus for it to locate in.

If there be much cellulitis, or inflammation, extensive erosions or excessive cervical catarrh, these conditions should be subdued before the operation is attempted. Resort to the treatment already laid down for cervical catarrh, the hot water injections, and the astringents, including tannin and glycerine, boric acid, etc. If the milder astringents are not sufficient, apply Churchill's tincture of iodine, but do not use the stronger astringents too frequently, or they will produce too great a degree of hardness. Twice a week will generally be often enough to apply them. If there be cystic degeneration of the glands, they should be punctured by repeated stabbings with a narrow bladed knife; it will be almost painless, and the loss of blood will relieve the hyperæmia. Give the patient iron and the lactophosphates, or the hypophosphates, belladonna, gelsemium and cimicifuga, as the case may require or the symptoms indicate. This preparatory treatment contains all there is in therapeutic treatment; it should always be resorted to, for it will sometimes remove all the unpleasant symptoms; and if it cures, nothing further is needed; but if it does not accomplish a satisfactory cure, the only rational thing to do is to operate.

In operating, place the patient in Sim's position and, if you can do so without using too great force, bring down the uterus, but do not use great force or you may do great mischief. The surfaces may be freshened with either scalpel or scissors. Emmet prefers the latter, for the greater rapidity with which the tissues can be removed by them. In preparing the flaps, the tissues should be denuded as superficially as possible. Be sure and leave undenuded, in the center, a sufficiently wide space to form the cervical canal; it must be left wider than will look necessary, for there will be some narrowing afterwards from cicatrization. Denude the outer surface a little over the edge, or there will be a fissure left afterwards. At the bottom of the angle remove sufficient of the hardened tissue of a V shape, so that it will not act as a compress when the flaps are brought together. Emmet insists that all the cicatricial tissue shall be removed. The operation as performed by Emmet is tedious, but the results are good. Van de Warker has greatly simplified the operation, by using an instrument of his own construction. It consists of a pair of forceps, connected together similarly to obstetrical forceps, the male blade having a needle at the distal end, and the female blade, a slot at the end, into which the needle is received. The lips are brought together and secured by the forceps, allowing the needle to penetrate but a short distance; a tenaculum is now used to properly adjust the lips, when the handles of the forceps are brought together, which thrusts the needle through, the female blade giving the counter pressure. The suture of wire is now passed into the slot in the end of the needle, the female blade is unlocked, withdrawn, reversed and again locked with its distal end on the same side of the lips as that of the male blade. The construction of the instrument is such that on bringing the handles together now, the distal ends are separated, the female blade presses against the cervix away from the male blade, and the needle by this action is withdrawn. With this instrument the operation can be quickly performed. The operation can be performed somewhat similarly, but not so conveniently, with ordinary instruments, that is, with dressing forceps, ordinary needles, and a good needle holder. Grasp the lips with the forceps, in a similar manner as described in using Van de Warker's instrument, having the outer edge where the sutures are to be inserted. The needles are passed through at the edge of the forceps. Do not remove the forceps until all the sutures on that side are put in. To control the hemorrhage use a turniquet, or slip a rubber ring over the cervix. If this cannot be done the hemorrhage will be troublesome. It can be controlled to a considerable extent, however, by using hot water. If there is hemorrhage after the operation, control it with hot water. The sutures should be disinfected. For the silk, Cheyne's formula is good. Pour a hot solution of wax nine parts and carbolic acid one part over the silk and keep it in the wax until you wish to use it. Catgut should be soaked for half an hour in an alcoholic solution of corrosive sublimate, one to one thousand. The instruments should also be soaked in an antiseptic solution. The utmost cleanliness should be observed in every particular; the hand should be very clean and should be washed in a disinfecting fluid. Finally, apply plenty of iodoform, pack absorbent cotton around the cervix and remove the speculum. This method will be found to be practically antiseptic.

After the operation the patient should be kept in the recumbent position and should be disturbed as little as possible. If the bladder does not act, use the catheter. We do not allow the bowels to become constipated. If catgut has been used for sutures, they need not be removed. If other things have been used, remove them about the seventh day. The cotton could be removed sooner and replaced with a little iodoform applied to it. Do not use injections, unless the discharges indicate that disinfectants are needed, but use the utmost cleanliness. Let the diet be as generous as the case will allow.

When Dr. Bowling, a pioneer medical man in the South, began practice he settled in the wilds of Kentucky, where he sat in front of his cabin for six months without a call. At last he heard the clatter of a horse's hoofs, and a lank, barefooted Kentuckian appeared. "Are you a doctor?" he asked. "Yes, and a good one," said Bowling. "What's the matter with that 'ar foot?" the man inquired, placing his heel on the fence. The doctor examined it closely, and replied: "That, sir, is erysipelas." "Ery-hell!" the man replied, "a bee stung me." The doctor moved to Nashville.

DETAILS OF GYNÆCOLOGICAL TREATMENT.

BY H. W. STREETER, M. D.
Rochester, N. Y.

[Read before the Medical Association of Central New York, November 16, 1886.]

"Success in the treatment of diseases of women lies wholly in attention to minute details." To impress these words upon the mind of the reader is stated to be the object of the most remarkable work on the subject ever written. And this will be my apology for presenting to you a resumé of facts which may be deemed by some too trite to need repetition. It has been established beyond the possibility of disputation by those who have had the most extensive opportunities for clinical and pathological observation, that underlying or accompanying nearly all diseases of the female genital organs, there is a condition of congestion of the pelvic circulation of greater or less extent and intensity. The obstinacy of this class of disease has been long recognized and acknowledged by all men of experience. The treatment has been, and is even yet, to a large extent empirical. Various remedies and methods have been adopted with the idea of correcting the condition which is seen through the speculum or felt by the finger with most distinctness, with little or no thought of any causative or auxiliary condition requiring attention. I desire to call your attention to the manner of carrying out the plan of treatment based upon the theory of reducing congestion.

In strict accordance with anatomico-physiological science and common-sense, it *should* succeed as far as it is possible for art to overcome the morbid conditions. No treatment can succeed unless it accomplishes this purpose directly or indirectly; whether intentionally or unintentionally. The evidence in favor of this plan is the strongest which could possibly be adduced, namely, that of the man and the institution with the largest experience in the world, T. A. Emmet and the Woman's Hospital in the State of New York. My own practice for a number of years has been based upon this principle. And as it has been more and more closely adhered to, results have been more satisfactory, relief has been more rapid and permanent, many cases which have resisted other methods of treatment have readily yielded.

A preliminary word as to the examination. Subjective symptoms should be taken for what they are worth and no more. Nothing should be taken for granted nor a surmise pro or con, for it is not right for a physician to risk his reputation or his patient's welfare upon uncertainties. Unaccountable symptoms are often explained by the unexpected discovery of local causes of reflex action. Nothing astonishes the patient and the young physician or impresses the older one more than the phenomena connected with the reflex or sympathetic nervous system. Far be it from me to attribute all diseases of women to the sexual organs, but there is no excuse in these days for the man who allows a woman to suffer from ignorance, carelessness or pharisaical bigotry in regard to gynæcological examinations. If, after carefully interrogating all the other organs, a doubt remains, that doubt should be removed by interrogating the organs situated in the pelvis. This examination can not be conducted with too scrupulous delicacy. A hasty, reckless manipulation with finger, speculum or sound affords little information and may do irreparable injury. We want to know the *usual* position of the uterus, and the digital examination should be made first with the patient on her feet and then on her back. The Sims speculum is the easiest and least painful of introduction and affords the best field of view, and should be given the preference as far as possible. Much can be accomplished by it without an assistant either on the side or in the genu-pectoral position, and it is claimed that by the Emmet or Darrow modification the need of an assistant is entirely done away with for all ordinary treatment. It certainly, to say the least, does no good to stretch or press on a tender vagina or uterus by a bivalve, and much harm may unconsciously be done. I rarely find it necessary to use the sound. When it is important (and the satisfying a useless curiosity is not important), to know the exact size and direction of the uterine canal, the sound must be used. Dr. Potter, of Buffalo, has recently written an interesting article opposing the use of the sound, and Lawson Tait says the sound and the speculum have done infinitely more harm than good, so much more value does he attach to the educated touch for the purposes of diagnosis. The less instruments are used the better. More can be learned and less harm will be liable to be done by vaginal and abdominal palpation, in nine cases out of ten, than by the elaborate artifices of the instrument-maker. The influence of the method of examination upon treatment and prognosis is a question worthy our most careful consideration.

The hot douche is the best poultice for acute congestion of the pelvis as indicated by heat, tenderness and leucorrhœa, and the best astringent stimulant for the relaxed vaginal condition accompanying chronic uterine displacement. Emmet says more good can be done by hot water than all other remedies. He insists upon its being always used in the recumbent position, and goes so far as to say *no* good can be derived from its use in the sitting posture. Much good *can* be derived from the douche even when not taken in the recumbent attitude, but certainly the latter position is essential in order to obtain the full benefit, and so essential that it well repays all the trouble. It should be taken as hot as can be borne and continued for twenty minutes, using about three gallons of water, at intervals proportionate in frequency to the acuteness of the congestion, on the same principle precisely as we apply a poultice to an external part. But in a large proportion of subacute and chronic cases this method, invaluable as it is, is impracticable, and the same result is apparently often effected by glycerine tampons and thorough packing. Exactly how the packing acts I am not prepared to say, nor to defend it from a theoretical standpoint, as a scientific remedy for chronic pelvic congestion. As far as I have a theory it is, that it acts by depleting the tissues (the well-known effect of glycerine), and by mechanical support. At all events, long experience has convinced me that the vast majority of uterine displacements can be more successfully treated by packing, when properly done, than by any or all other methods.

The results are quicker, more permanent, less liable to produce pain, or be productive of harm instead of benefit, than any other method. It is usually in my experience well borne, produces an immediate sense of relief and support, and very rarely any discomfort. In forward displacements, I have been for years in the habit of using the abdominal supporters, either with or without the packing, according to indications in individual cases, with great satisfaction. When unsatisfactory, usually I have found it due to improper adjustment.

The douche should be used before each renewal of the packing, and Churchill's strong tincture of iodine applied to the vaginal vault and cervix.

NOTE:—The iodine, glycerine and douche, are all used for the same purpose to promote capillary contraction, and that they all do effect this is one of the most conclusively proved facts in clinical therapeutics.

By pursuing this course systematically, the treatment of displacements instead of being discouraging and disappointing, has become to me one of the most satisfactory branches of practice. If I have not been able to effect radical cures, I have been able to afford in a very short time an immense amount of long continued and what seemed to be in many cases permanent relief from very distressing symptoms.

My experience leads me to the conclusion that when this plan of treatment is unsatisfactory, it is due either to its improper execution or its application to improper cases. There are cases, although I have found them rare, to which this method is not applicable, at any rate in private practice. While it seems and is simple, yet the judgment becomes educated and a certain amount of skill acquired by practice, both of which are essential to success in this as well as every other department of our art.

In amenorrhœa, dysmenorrhœa, menorrhagia, endometritis, and cervicitis, abrasion of the os or so-called ulceration, and leucorrhœa, all of which are only symptoms of pelvic congestion, this plan of treatment is far more effective than any other. This can only be accounted for on the ground that it equalizes the circulation, a purpose which all will allow, on a moment's reflection, must be subserved by whatever means these symptoms are relieved.

Incision and division of the cervix, advocated by Sims in his early years and at one time largely practiced, have been thoroughly tested and not found to produce the favorable results which they should, on the theory that dysmenorrhœa and sterility depend on a mechanical obstruction. A foreign surgeon, in speaking of the craze over the operation for lacerated cervix, sarcastically remarks, "The Americans are sewing up Sims' incisions."

On the same principle dilatation for the purpose of enlarging and straightening the cervical canal was largely practiced years ago, and is again coming in vogue. Whether the success claimed for it is due to the mechanical or physiological effect on the pelvic circulation is a question. The fact that it is not safe where there is pelvic congestion of anything like acute character, and that in amenorrhœa with anæmia it has proved especially beneficial, would indicate that the result is due to its effect in stimulating the torpid circulation of passive congestion. A similar train of reasoning applies to the use of intra-uterine repositor and pessary.

Both are useful in suitable cases, but they have been monstrously misused, and there can be no doubt that they have been the cause of full as much harm as good. I never could understand how straightening up a dislocated uterus for a moment is going to produce any permanent benefit (and it certainly is liable to excite a serious attack of cellulitis), any more than the reduction of a dislocated joint unless means are employed to maintain the organ in its normal position. The correction of the displacement, says Emmet, is desirable, but more important is the correction of abnormal circulation connected therewith. It is to be remembered that the position and attachments of the uterus are much more mobile than a bony articulation. The position is constantly changing with every respiration, and with defecation and urination. Savage's plates show, conclusively, that the ligaments do not afford the support with which they have been accredited from time immemorial, but that this support is principally from the pelvic cellular tissues. A pessary, like a shoe, must fit comfortably. If it causes pain, either it does not fit, or its use is contra-indicated by the condition of congestion. It may constrict the tissues and provoke inflammation by pressure. A properly fitting pessary, when indicated, is as indispensible to comfort as a well-fitting shoe. It is claimed that by hot water, glycerine, packing and iodine, the use of other more questionable means can be avoided in the majority of cases, and the way paved for the most successful use of other means when necessary; as, for instance, the use of the pessary.

Cleansing, astringent, sedative, stimulant or caustic applications are often useful to the mucous membrane of vagina or uterus as auxiliaries, but should be regarded only as such, and never given primary importance. Far, far too often are they depended upon as the principal or only therapeutic measure, while the underlying cause of which the condition of the mucous membrane is only a symptom, is entirely lost sight of. None have a specific value, and therefore I shall not take up your time in discussing their relative merits. When any medicine is used in gynæcology, it is to be used with the idea not that there is any drug possessing especial powers over the female generative organs, but rather is it to be always remembered that the same broad principles of chemistry, physiology, and therapeutics are alike applicable to all parts of the body. So long as the tongue is coated and bowels over-loaded little or nothing can be accomplished by tonics. It is a marvel, says Emmet, that blood-poisoning does not occur in cases of habitual constipation, when we consider the incredible accumulation which often takes place, and the vitiated character of the secretions.

By emptying the bowel thoroughly we effect a great improvement in digestion and remove a great obstacle to the pelvic circulation. Fæcal impaction of considerable amount very often exists, even when the constipation is not particularly obstinate. Cathartics alone cannot be depended upon to remove it. It is better to make sure by repeated injections at the start, that no such accumulation exists. This is one of the most important points in the treatment of uterine trouble, and one so common that I believe we are apt to neglect to give it the scrupulous attention which it deserves. As the object of local treatment is to give tone to the pelvic circulation, so the object of general treatment is to give tone to the general circulation by improving nutrition. This is certainly not to be accomplished by sedatives and anodynes, although we are often obliged to resort to them as we are to stimulants, cathartic and medicinal tonics as temporary auxiliaries.

But I would utter my protest against the wide-spread and worse than useless *dependence* upon drugs. The most nutritious food, of which cod-liver oil and milk are the most rapidly assimilable forms, should be *crowded* until the color becomes good, the hands and feet warm, the intermuscular spaces filled out. But food will not be assimilated without abundant sunlight, exercise and fresh air. Out-door exercise must be vigorously insisted upon at regular daily intervals. Few patients but that can walk fifteen minutes three times daily.

Idleness of mind or body should be peremptorily forbidden. Not a moment should be allowed for the patient to dwell upon her sufferings. She should arise, at the latest, by seven o'clock and be kept constantly busy until bed-time in attending to her domestic affairs, or in the work of religious, charitable, social or literary organizations. It is well that she be thrown into association with other people and become interested in the welfare of others rather than solely in herself. One of the best forms of mental occupation is pursuing a systematic course of reading and literary work in connection with some such society as the Chautauqua Circle. The desire for knowledge once aroused, the appetite grows, and in her desire to know more of the science, art, history and literature of the world, she forgets her troubles, the intellectual faculties take the ascendency over the emotional; she begins to feel a higher ambition, a new object in life. Under the fascinating therapeutics of mental culture she develops from an insipid, aimless, chronic invalid into a live woman of strong nerve and broad ideas. It has been said that these details are impracticable and can not be carried out in actual practice. Unfortunately there are, especially in cities, many patients with whom the struggle for life is so bitter that the physician must be contented to do the best that circumstances will allow. But there are also many cases in which they can be observed, and if the physician has a thorough comprehension of their importance and endeavors with conscientious earnestness to impress it upon his patients, I believe no class of patients are more anxious and willing to do all they can to help themselves.

The last detail to which I would call attention is, taken all in all, the most important of any as regards the personal welfare of *both* patient and physician. He should make a constant study of human nature and individual peculiarities, in order to acquire a commanding personal influence over his patients, to gain their sincere esteem as a friend, their respect as an honest man and skillful physician. With this implicit confidence once secured, patients *will* observe directions with almost sacred scrupulousness. Many a physician fails of success and many a patient remains bedridden for years simply and solely for want of exercise of a strong personal influence.

Time can not be employed in a more profitable or interesting way, at the bed-side or in the office, than in studying how to most effectually acquire and apply this wonderful psychological therapeutic agent. It is the right hand of the physician, and often the only hope for the patient. Incomprehensible, oftentimes, no force is productive of more practical tangible results in relieving human suffering.

A STUDY OF THE VIRUS OF RABIES.

From La Semaine Medicale.

BY J. LIVINGSTON ROSEBOOM, M. D.
Rochester, N. Y.

Prof. von Frisch of Vienna, who since last April has been occupied in experimenting with the virus of rabies and the method of prophylaxis against rabies as advocated by M. Pasteur, has made a communication to the Academy of Science in Vienna, giving the results of experiments. He is the only writer so far who has tested by numerous experiments the facts advanced by M. Pasteur. In this recent communication, Prof. von Frisch stated that he had confined himself strictly to the indications furnished by M. Pasteur, and that most important factor for preventive inoculation, the permanent virus (*le virus fixe*) was placed at his disposal by the French savant himself.

Prof. von Frisch sums up the results of his investigations in the following sixteen conclusions, of which only the first, second, fourth, fifth, sixth, seventh and tenth agree with the results obtained by M. Pasteur:

First—The virus of rabies is found in the most concentrated form in the central nervous system (brain and spinal cord) of animals that died of rabies.

Second—Small quantities of cerebro-spinal substance from animals dead of rabies, injected under the dura-mater after trepanation, will surely cause the same disease in the infected animals after a latent period of from fourteen to twenty-one days, and the disease can afterwards be transmitted from these animals to other animals.

Third—The same disease with the same symptoms, and after the same period of incubation, can be produced in animals by intra-cranial infection with particles of spinal cord from men dead of rabies. The identity of the affection in men and animals is thus placed beyond doubt.

Fourth—In subcutaneous injection of the cerebro-spinal substance, the infection is less sure and the period of incubation longer than in intra-cranial infection.

Fifth—The quantity of virus injected under the skin appears to be in inverse proportion to the duration of the incubation period; the smaller the quantity the longer the period of incubation.

Sixth—By continued intra-cranial transmission of the virus of rabies in rabbits, a shortening of the incubation period is obtained after a series of generations; at first irregular, but later regular and always increasing.

Seventh—The fixed virus with an incubation period of seven days, that M. Pasteur obtained by inoculation from rabbit to rabbit for forty or fifty generations, exceeds in intensity the virus of rabies of the street, not only by the earlier appearance of the disease but also because the animals, without exception, die of rabies as well after subcutaneous injection as by inoculation under the dura-mater.

Eighth—The fixed virus appears not to allow by subsequent transmission a notable shortening of the incubation period (sometimes the disease appears after six days); on the contrary, the period of seven days is not constant, for it is at times prolonged to eight, ten and even twelve days. On the other hand, a period of incubation from eight to twelve days and a virus of the same virulence as that of the fixed virus can be obtained by transmission of street rabies, and this sometimes from the second or third generation.

Ninth—The process indicated by M. Pasteur for obtaining the fixed virus with an incubation period of seven days, is probably not the only process, for it can be obtained much sooner independently of the series of transmissions, and such virus is constant in its effects and period of incubation.

Tenth—The virulence of particles of the spinal cord diminishes day after day by drying at 20° C. (68° F.) over caustic potash, and it is perfectly extinct after a drying of from fourteen to sixteen days.

Eleventh—Animals injected under the skin with a series of vaccines attenuated by a longer or shorter drying, are rendered refractory by the weaker vaccines to the action of the stronger vaccines, provided that the gradually strengthened virus does not follow too rapidly.

Twelfth—Animals inoculated subcutaneously for ten days with vaccines of constantly increasing virulence (from a spinal cord of five days to that of one day) do not remain completely refractory to infection with fresh street rabies, and have escaped very exceptionally from the action of intra-cranial infection.

Thirteenth—Rabbits and dogs infected intra-cranially after trepanation with the virus of street rabies (with an incubation period of sixteen days) have succumbed without exception to the rabies, notwithstanding the preventive treatment instituted in the manner above mentioned.

Fourteenth—M. Pasteur attributed the results obtained by Prof. von Frisch to the method of slow vaccinations, and recommended a more rapid process: "The vaccinations should commence a short time after the inoculation, some the following day, and should proceed rapidly, giving a series of preservative spinal cords in twenty-four hours, and even with less delay; then to repeat the treatment every second hour once or twice." The experiments made conforming to these indications gave unfavorable results, all the animals dying of rabies.

Fifteenth—These experiments show the very important fact that in the rapid process, the weaker spinal cords do not offer with much certitude an immunity against the stronger. From a series of dogs and rabbits that have served as tests for the experiments in question in the preceding paragraph, and in which the rapid process has been applied without preliminary infection, the greater number died of rabies.

Sixteenth—Animals submitted to the preventive treatment after subcutaneous infection with street rabies have most all died of rabies, even when the period of incubation was thirty-four days.

The results of these experiences, says Prof. von Frisch, is that the method of M. Pasteur tending to render animals refractory to rabies requires much more study and experimentation before it can be pretended that it is certain. At present there does not exist a sufficient scientific basis for instituting a preventive treatment for rabies in men who have been bitten; and, moreover, it is possible to suppose that the preventive treatment itself, and especially the rapid process recently extolled by M. Pasteur, might be able to transmit the disease.

ON NATIONAL PHARMACOPŒIAS.

ABSTRACT OF A LECTURE BY OSCAR OLDBERG, PH. D.,
Prof. of Metrology, Buffalo College of Pharmacy.

[Stenographically reported for THE MEDICAL PRESS, by A. L. Benedict.]

In ancient times materia medica and pharmacy belonged to the province of the physician, and the physician and pharmacist were one person. Very early in the history of medicine superstition, ignorance and false notions had a good deal to do with materia medica and the use of drugs. The substances used as medicines were such as happened to be very peculiar, or happened to be very rare and costly, not easily obtained, or about which there was something mysterious, or they were substances which happened to have a very pronounced odor, bad or good; that is still the case to some extent. Secret nostrums were common. In the earliest times there were probably no more than one hundred distinct drugs known. Among those drugs were but very few of the narcotics which you will recognize as among the most potent and valuable of our present pharmacopœia. Among the drugs we find conium, opium, aconite, veratrum and hyoscyamus. Cathartics and emetics were very common, and many of the drugs in the list were of that class. Very acrid substances were common, such as squills and several others which are still used. But most of the drugs were of organic origin. Many of them were vegetable, but a very great many were animal drugs too. Only five metals were known in those days, and very few chemicals. For that reason, of course, we know that the medicines did not number inorganic substances.

It was not until the time of Basil Valentine—a quack, by the way, although he was professor in the university—that a great many inorganic substances were introduced into medicine. Basil Valentine introduced a great many preparations of antimony. He wrote a little pamphlet named "The Triumphant Chariot of Antimony." In that he praised antimony for almost everything. One of his preparations was called perpetual pills (pilulæ perpetuæ) which were simply little globules of metallic antimony. They were not only a pretty effective medicine, but were pretty economical as well. They were given first to one patient and then they were cleaned and given to another, and so on.

Later on more progress was made, but still we find a good many things in the old materia medica and the old practice of medicine which are astonishing today. We are told that four merchants in the city of London imported seven million leeches in one year. If those leeches were as robust as most leeches are, they probably would have taken away about fifty thousand gallons of blood from the Britons.

Among the remarkable preparations formerly used was another which deserves some mention just to illustrate what sort of a materia medica they had. It was the so-called "sympathetic powder." It was used to heal wounds, but it was never applied to the wound, but it was applied to the weapon that inflicted the wound. The directions that went with the powder, however, were that the wound must be carefully cleansed and washed and then bandaged nicely, and not disturbed for a week. Still, the sympathetic powder got the credit of healing by first intention.

Then, finally, pharmacopœias were written for the purpose of securing uniformity, but there were so many pharmacopœias and they sprang up in so many places that there was little uniformity after all, and the errors and ignorance which they sought to remove still continued, even in the pharmacopœias themselves. One notable illustration of this—I wish I had the book with me, that I could read word by word just the account that Dr. Quincey gives in his pharmacopœia of the difference between calomel and corrosive sublimate. Dr. Quincey enters into a discussion to show that the chloride of mercury—(and you must remember that calomel, in these days, was made from corrosive sublimate, triturating it with more mercury and then subliming it; it had to be sublimed six times before it was very good calomel)—was termed a noble medicine. The reason, he says, why such a corrosive, poisonous substance as the bichloride of mercury was made such a mild and noble medicine by trituration and sublimation was that the molecules of the bichloride were made of needles or sharp points which were sharp enough to wound the person when the medicine was given; but when mixed with the mercury, these sharp points were broken off by the weight of the mercury, and although the momentum of each molecule was greater on account of the greater weight, they would not do so much damage, because the sharp points had been broken off in the sublimation. Such explanations as this abounded in the pharmacopœias in those times.

New discoveries were made from time to time, and real science gradually found its way into the pharmacopœias and the practice of medicine as well. Still many nasty drugs continued to remain on the list, and many absurd compounds of lizards and vipers, and so on, were found in English pharmacopœias not many years ago. One peculiar preparation which was made with great ceremony was a certain electuary. Here is a French pharmacopœia issued in 1804 which has that preparation in it. This electuary was very celebrated, had existed for years, and was prepared in the presence of the public officers and functionaries. It was made of seventy-three ingredients, though a Frenchman afterward reduced the number to fifty-eight.

At first, when Latin phrases, Latin terms and the Latin language were introduced into the pharmacopœia, perhaps selfishness had a great deal to do with it. Latin was used in religion and law, as well as in medicine and the pharmacopœia, for the purpose of keeping knowledge away from the people. But some progress was made. Many pharmacopœias have dropped out of existence in Germany and England which existed a short time ago only, and national pharmacopœias have taken their place.

The pharmacopœia of the United States originated in 1820, later than other codices, but I believe that I am justified in saying that to-day the United States pharmacopœia stands well up with those of the rest of the world.

New chemistry has kept pharmacists very busy indeed. New chemicals, organic and inorganic, have found their way into the pharmacopœias. New vegetable drugs are being discovered constantly, but new organic drugs have not been introduced into pharmacopœias as readily as inorganic preparations have. Why? Because there is more exact science connected with the inorganic compounds which we have than with the vegetable and animal drugs. We might just as well leave the animal drugs out of consideration, inasmuch as the percentage of animal substances is below 2% of the whole numbers of organic drugs. But conservatism has kept a good many valuable vegetable drugs out of the pharmacopœias to this time.

Some new drugs, however, were introduced; cinchona and a number of other notable instances might be mentioned. At the same time a great many of the old relics and trash have been dropped except from the French pharmacopœia which still has several hundred of them.

A recognition of the relation of the constituents of drugs to their pharmacodynamical character is of great importance, and this relation is being studied and the knowledge applied; and although it has not been very consistently applied to this time, it is certainly to be hoped that this plan will be applied in the revision of pharmacopœias hereafter.

In order to be able to speak knowingly on this subject, I analyzed 5% of those vegetable and animal drugs which are most used in this country, without reference to pharmacopœias. I find that out of the entire 5% only six are animal drugs, 120 out of the 5% are roots, sixty are barks, fifty are fruits, fifty are seeds, fifty are leaves, and the rest of the plant parts are scattering. Eighty herbs are in the 5%, but all of these eighty are of relatively small value. Then I picked out the 5% 120 which were really, in my judgment, used more than the rest and liable to be more important than the rest. Thirty-three of them were roots, twenty barks, twelve leaves, ten fruits, ten seeds. You see the same proportion again. Then I studied these drugs with reference to their proximate principles, their chemical constituents. As might have been expected, the roots were found to contain the most active constituents, and that barks came next, although the number of barks that are used as medicines is considerably increased by the fact that tannin is present in so many barks, and nearly all are astringents or of that class. Then followed the herbs, leaves, fruits and seeds.

Out of those 120 important drugs, there were thirty-one drugs that contained alkaloids, one-fourth of the entire list. Alkaloids were not known seventy-five years ago. We know a hundred of them to-day, although we know perhaps only eighty or ninety drugs pretty well that have alkaloids, but some of these drugs contain more than one alkaloid.

Thirty of the 120 drugs are stimulants and contain volatile oils and acrid resins; twenty of them contain other acrid substances than acrid resins, principally glucosides. Ten out of the 120 are astringents, ten cathartics, ten bitter tonics.

Then I separated from the 570 drugs all the drugs that were acrid in their nature. I found nearly half to contain glucosides or resins of definite constituents. I found ten to contain alkaloids.

Then I separated from the entire list all the poisons. I found fifty poisons in the 570 drugs, and those fifty poisons are, perhaps, the most valuable of all the drugs we have. Out of those fifty poisons twenty-five, or one-half, contain alkaloids, and twenty-one, almost the entire other half, contain glucosides. That will convince us that the constituents of drugs have a good deal to do with their value. Out of the 100 alkaloids known, two-thirds are poisons, twenty-eight are highly important in medicine, not one of them inert.

But when we turn to the pharmacopœias and examine the materia medica lists, we find a great many drugs which are retained in the materia medica lists simply because they once got there and nobody wants to drop them. People are too conservative to think of droping castoria and asafœtida, and a good many others, such as herbs that contain a little stimulating, volatile oil, which gives odor and taste to the drug. But we find such things as a bark containing at least six alkaloids, a drug that undoubtedly has remarkable physiological effects, that has no place in the pharmacopœias, and I might mention a great many other drugs which have decided medicinal effect, that have no place in the pharmacopœias because conservatism has kept them out.

How can doctors agree about that? It is a proverb that doctors do not agree, as a rule, and about the admission of drugs to the pharmacopœia they agree less than about anything else, it seems to me. They lay great stress on experience, the results of actual trials of drugs, but what has the pharmacopœia to do with the results of the trials of drugs? It does not teach therapeutics, it has simply to describe a drug, to fix its identity, to describe proper tests for it, so that we can tell a good quality from a poor quality, and then to give rules for making simple preparations of those drugs. Now, then, whether a drug is valuable or not valuable is of no account whatever; a physician can use it whether it is in or out of the pharmacopœia. Experience is a very good rule when it does not entirely ignore analogy and reason.

We had a drug named cundurango about whose use there was a good deal of scandal, and now we find that the German pharmacopœia, the most conservative in the world, has adopted cundurango the first of all, contrary to the general rule of conservatism. Damiana is used as an aphrodisiac, as you know. The Committee of Revision of the United States Pharmacopœia were discussing the question as to whether it should go in or not. One professor spoke very warmly in favor of it and hoped that it would be admitted. Well, nobody else had anything to say on the subject, we took a vote on it, and damiana was left out. The doctor who had advocated it then said: "I see the gentlemen have tried damiana and found it wanting."

But it seems to me that the proper rule to go by is something like this: Everything that is used in medicine and which appears rational, which has evidence of value about it, ought to go into the pharmacopœia, and the less we know about it the greater the reason for putting it there; for if we want to know anything about it, put it in such a shape that the physicians may know what they are trying, and what their results come from. That is the way to increase the number of valuable drugs in the list. Here is, say, coto bark, a new drug altogether. Some physicians say it is very valuable, others say it is good for nothing. The drug has value, for it has substances which are crystallizable when separated from the drug, which have a definite chemical constitution, and so on—and yet we do not know its source. Some members of the committee said we must not put coto bark into the pharmacopœia because we did not know what it was. If we do not know what it is, we should say, "Coto bark looks so and do," and then give as close a description as we can, so that, looking into the book, it can be identified, its quality judged, and the drug tried on its real merits. The drugs which are used to any extent, therefore, should be in the pharmacopœia whether they are good, bad or indifferent, and it would only make the book perhaps twice as large as it is. To be sure, we know between six and ten thousand vegetable drugs,—I can't guess any nearer than that,—that have been or are more or less used in medicine, but, I dare say, only one thousand of them would deserve to have a place.

[TO BE CONTINUED.]

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WE TAKE sincere pleasure in announcing that Dr. W. H. Ford, of Utica, has joined the editorial staff of THE MEDICAL PRESS. No one in central New York is more widely or favorably known than our new associate; and we are sure not only that his influence will at once be felt, but that his accession will be hailed with acclamation.

INFECTIOUS SUBMAXILLARY ANGINA.

The numbers of *Le Progrès Médical* for the last of August and the month of September contain an exhaustive memoire on this subject by Paul Tissier. Prof. Ludwig, of Stuttgart, described in 1836 what is known as the "angina of Ludwig." Its existence as a distinct morbid condition is denied by Boehler and others, but is upheld by Prof. Roser. Tissier coincides in this latter opinion but substitutes for "angina of Ludwig" the term "infectious submaxillary angina," which he defines as an infectious septic process, necessarily and always identical with itself as to its pathognomonic germ, occurring secondarily to an ordinary primitive lesion of the buccal cavity, the place of entry for the morbid agent; characterized by induration, a gangrenous tendency, progressive advance in the super-hyoid region, a special clinal evolution and by general grave indications.

The early symptoms of the disease are chills, a little fever, general lassitude and slight pain in deglutition. After a day or two a painless tumefaction appears in the submaxillary, more rarely in the parotid region. By the fourth day the tumor has increased greatly in size, and upon palpation appears hard like wood, sharply defined by the soft parts, and is slightly painful. The tumor continues to enlarge. The temperature rises to 38.5°–39° (101.3°–102.2° F.); the pulse is frequent and full, thirst excessive, perspiration profuse, urine scanty, red, and depositing sediment. About the seventh day, or soon after, is the critical point of the disease. The hard and stony tumor covers the whole cervical region. The tongue is more or less involved. Small brown spots begin to appear on the floor of the mouth, and exteriorly at the level of the angle of of the jaw are slightly raised areas of skin. The mechanical pressure of the tumor on the larynx causes intense dyspnœa. The patient sometimes dies in the convulsions of asphyxia. Signs of the infection appears in albuminuria and articular manifestations. The phenomena of septic intoxication and the typhoid state are very pronounced. The spots in the mouth discharge very fetid grayish sanies; the spots on the skin do so more rarely. Death may follow in coma, preceded by a rise in temperature; or slow and gradual improvement may begin from this time.

Death may result either from (1) the general intoxication with its train of ataxo-adynamic signs, or (2) from laryngeal complications with the general symptoms of asphyxia, or (3) by secondary infection with pyæmic symptoms.

Post mortem examination shows lesions both local and at a distance. The former are more numerous, affecting the cellular tissue, muscles, and lymphatic glands of the submaxillary region, the floor of the mouth, the tongue, larynx and trachea, and sometimes the nerves, arteries, veins, and mucous membranes of the region, the tonsils and the teeth. But any periostitis or osteo-periostitis should be sufficient to exclude a suprahyoid phlegmon from the class of infectious submaxillary angina. The submaxillary gland may be healthy or otherwise. It is unusual to encounter any suppurating center as in glandular inflammation. Microscopic search for bacteria is difficult. In one case micro-organisms were numerous, but their study was considered of little value on account of the free entrance for strange microbes into the mouth.

Lesions at a distance, because less studied, are rarer; however, besides albuminuria and articular difficulties, a subicteric tinge of the eyes has been noticed, denoting implication of the liver; also affections of the peritoneum, spleen, lungs, heart, and cerebrum. From the phenomena of its development and the morbid anatomy the author draws his definition of the disease, insisting on its twofold character, local and general, and upon the difference between this and ordinary supra-hyoid phlegmons. He also considers that to the latter belong most cases diagnosed as angina of Ludwig, and therefore proposes the name infectious submaxillary angina to avoid confusion. This indicates the anatomical region affected.

The contagious character of the disease is affirmed, in proof of which are given the cases of two postmen of the same department, who were similarly afflicted with a few weeks interval. The unknown germ is supposed to find entrance from the mouth through the lymphatics, or more rarely by the glandular ducts. The disease is most common between the ages of twenty and thirty, rarer at an earlier period, unknown in old age. This may be due to the fact that blood is more abundant and the secretions greater in these parts during youth than later. Soldiers seem especially liable, Roser noting seven in twenty cases, explainable by the nature of their life. The prognosis is doubtful. Ludwig had three deaths from four cases, W. Parker one from two cases, and the author one from two.

Tissier shows that though diagnosis is easy in a marked case, in those less pronounced it is more difficult, and is liable to be confounded with other affections of the same region, notably infectious tonsilitis, erysipelatous angina, peridental inflammation, maxillary osteo-periostitis, traumatic supra-hyoid phlegmon, adeno-phlegmon, supporating tonsilitis, and hyro-hyoid hygroma, and inflammation of the serous bursa of Fleischmann. Especially is this true of infectious tonsilitis.

The treatment should be both general and local. The former consists of the use of alcohol and tonics and antiparasitic agents, such as quinine, mercury, salicylic acid, creosote, etc. The local treatment requires washing out the buccal cavity with antiseptic liquids (boracic solution), injections of antiparasitics (sero-sublimate) into the indurated tissue, application of energetic revulsives (venous cupping, leeches), and as soon as a soft area is formed, denoting suppuration, incision should be made with all antiseptic precautions, and the material evacuated.

FIRST AID TO THE WOUNDED SOLDIERS.

Not long ago we made some editorial comments on the fact that in the National Guard no provision was made for the care of the wounded other than the mere appointment of surgeons. Since that article appeared, we are happy to say (and, by the way, it was copied in full in *The Army and Navy Journal*), considerable activity has been manifested at military headquarters both in this State and in the regular service. Post surgeons have been directed to give instruction to officers and men; and regimental surgeons in the State guard are soon to undertake the same duty.

After all, Homer was not far out of the way when he made Nestor say:

> "A wise physician, skilled our wounds to heal,
> Is more than armies to the public weal."

* * *

On Tuesday, March 1, will take place the commencement exercises of the Medical Department of the University of Buffalo. The evening exercises will be largely composed of the address to the graduating class by Prof. Cassety, of the State Normal school, and the address to the alumni by Dr. Wise, of the Willard Asylum.

At the alumni meeting the address of welcome will be delivered by Prof. Pohlman, and there will be papers by Dr. J. H. Pryor, on Prognosis in Valvular Lesions of the Heart; by Prof. Mann, on the Removal of Solid Abdominal Tumors by Laparotomy; by Prof. Park, on Intubation vs. Tracheotomy, and others. The exercises bid fair to be very interesting, and every alumnus should make an effort to attend.

At New Holland, Ohio, Mrs. Arnold has just celebrated the one hundred and ninth anniversary of her birth; and her two sisters are still living, aged, respectively, one hundred and six and one hundred and twelve.—*Exchange.*

Correspondence.

LETTER FROM HAMBURG.

Notes from Dr. Max Schede's Clinic.

HAMBURG, January 14, 1887.

My Dear Doctor—It might not be without interest to your readers to hear something from the largest hospital in Germany, das Algemeine Krankenhaus in Hamburg, so much more, as I, by the courtesy of thc surgeon-in-chief, Dr. Schede, and of his six assistants, have been accorded the privilege not only of witnessing the many operations daily performed, but also of visiting the wards with them and seeing the results of the operations, and especially the results of their antiseptic methods.

The hospital is about fifty years old, and is filled to overcrowding with patients, so much so that on an average there are only 600 cubic feet of air for each patient. A new hospital, built in pavillions, for 1,200 patients, is under erection and will be finished in about a year. Dr. Schede's wards contain upon 700 patients, in six stations or divisions, each under one assistant surgeon responsible to the surgeon-in-chief. During the last year 16,397 patients were treated in the hospital, of which 4,010 had surgical diseases, the average daily number of patients being 2,052. You will, from that number understand, that there scarcely can be mentioned a disease, which is not represented in force in the hospital. Besides these, 4,273 patients were treated in the polyclinic for surgical diseases. The facility for seeing operations and studying antiseptic surgery is unsurpassed, so much more, since there is not such a crowd of strangers as usually is found in Berlin and Vienna, each preventing the other from seeing anything.

Between 9 and 11:30 A. M. each assistant-surgeon changes the necessary bandages in the operating rooms, to which the patients are carried on a multitude of stretchers, and then makes his daily visits. From 11:30, sometimes till darkness, operations are performed by Dr. Schede, each assstant having one day in the week to present his patients for operation. From 5:30 P. M. newly arrived patients are bandaged and minor operations performed by the assistant-surgeons. The new-comers are kept in special reception-rooms till next day to be personally examined by the surgeon-in-chief, and are then sent to the different divisions.

During last year 1,809 operations were performed in the clinic, a large number of which were of severest nature, as for instance, thirty-six complicated fractures, sixty-seven amputations with one death from collapse, and four from other diseases (phthisis, etc.), 108 resections, 32 osteotomies with one death from tuberculosis, 185 extirpations of tumors, 9 ovariotomies, all recovered, 157 tracheotomies on account of diphtheria, of which 88 died, etc. A very large number of children with tuberculous affections of joints may daily be seen, in the treatment of whom appear some novel features.

In an excellent paper, read before the congress of German surgeons in Berlin in April, 1886, Schede calls the attention to the false belief, that blood aways acts as a foreign body in wounds, necessarily decomposes and then produces dangerous wound diseases, unless perfect drainage and compressive bandages are used.

On the contrary, blood is an excellent plastic material, organizes under antiseptic precautions with ease, and this organizing quality may be used in the healing of large cavities, bony or other; the cavities are allowed to fill up with antiseptic blood, and, by its organization, heal with astonishing rapidity. Drainage-tubes act as foreign bodies, and may be discarded.

The occasion for this novel treatment was given by the experience gained by Phelps' operation for pes varus. If the wound, which passes through skin, fascia, muscles, tendons and articular bands into the widely opened talo-navicular articulation, is simply covered with protective silk, under which the blood accumulates, and an antiseptic bandage, and the foot is then perfectly reduced into its normal position and kept there by aid of a bandage of plaster of Paris, the wound may be left undisturbed, and when, in two to three weeks the bandage is removed, it will be found perfectly healed without any secretion whatever, and, what is the most astonishing thing, with unimpaired function, the severed tendons having found each other and united again. Similar results are gained by large sequestrotomies. The operation is done bloodlessly, all diseased bone removed and the cavity carefully disinfected with sublimate (1 to 1,000). The wound is then sutured with catgut with the exception of a couple of smaller openings, through which a superabundance of blood may be absorbed into the outer bandage. The wound is covered with protective silk, and is then allowed to fill with blood, Esmarch's bandage being removed. The protective silk will partly act as a safety valve by preventing too copious an accumulation of blood in the cavity, partly prevent its gretting dry by evaporation. The usual antiseptic bandage is then applied, without any drainage tubes, and the wound left to itself. Smaller bone cavities heal under this treatment in twelve to fourteen days, and very large ones in three to six weeks.

The same treatment is used in resections, arthrectomies, etc. No drainage tubes, no bone sutures, the wound left partly open to prevent a too great accumulation of blood, covered with protective and then filled with blood and left to itself, and I have myself witnessed the first removal of the bandage after four to five weeks in a number of arthectomies of the knee with perfect removal of the capsule, and the wound was in every case found perfectly healed, no tenderness whatever, and a somewhat movable joint, which the patient was immediately able to use by aid of a bandage of plaster of Paris. Schede calls the process "Heilung unter dem feuchten Blutschorf," healing by aid of a moist blood coagulum. The same process is used extensively in all operations on tendons, lacerated wounds, etc.

Just as drainage-tubes are discarded, sutures of bones are omitted in resections. The wound is united with catgut sutures, some deeper sutures passing through periosteal and fibrous tissue, severed tendons, etc., but left partly open on the lower angles, and a contra-opening is made over the extirpated bursa subcruralis, if the knee be the affected joint. The wound is then covered with protective silk, and allowed to fill with blood, after the usual antiseptic bandage first has been applied. In it two long, hard rubber splints, which are easy to disinfect, are imbedded, and over the whole a light starch bandage. If a perfect resection is made with removal of the epiphyses, or part of them, a long outer splint is added, reaching from the axilla to the foot, for which there is a projection, and secured with plaster of Paris. This long splint prevents the rotation outwards of the femur, which else is apt to occur, and as the foot, which is secured on a Volkman's splint, cannot rotate too, it would else, after recovery, be found rotated inwards.

In cases of complicated or comminuted fractures, the wounds are invariably freely dilated, loose splinters removed and everything thoroughly inspected and disinfected with sublimate (1 to 1,000), and the fragments are then screwed together by aid of a little apparatus invented by the first assistant, Dr. Hausmann, which has the advantage of being less difficult to apply and less injurious than silver sutures, while it, on the other hand, is removed with ease. The apparatus consists of a little metal plate or band, one centimeter broad and perforated with holes; it is laid on the periosteum and through the holes the screws are screwed into the fragments to keep them in position. The lower part of the plate is bent into a right angle to favor the extraction after the screws have been removed by aid of a screw-driver. The apparatus is left *in situ* four to eight weeks, according to circumstances, the wound being treated antiseptically. I have seen this little apparatus employed several times, and admire the ingenuity of Dr. Hausmann. Large and small granulating wounds after operations, ulcera cruris, burning, etc., are treated with transplantations after the method of Theirsch. The granulations are first removed with the sharp spoon, the rather copious bleeding stopped with compresses dipped in a solution of chloride of sodium (0.6 %), which are kept on the wound about ten minutes. Long pieces of skin are then removed from the well-cleaned thigh with a sharp razor, they being five to ten centimeters long, one to two centimeters broad, and as thick as microscopic preparations and containing the papillary layers of the skin. They adhere to most anatomical structures, even to bone, deprived of its periosteum. I saw a large wound in the forehead, produced by taking a flap for an artificial nose, heal per primam by transplantation of such flaps directly after the operation. It is astonishing to see how quickly even very large wounds are healed by this method, and in time the cicatrices get quite firm and movable again.

Phlegmons are freely incised, and when all the necrotic tissues have been cast off, the granulations are scraped off with the sharp spoon, the wound freshened with the knife, and secondary sutures applied. Healing per primam then takes place.

In suppurating adenites the inflamed glands are totally removed by operation, the wound filled for a week or so with iodoform gauze, and then secondary sutures applied. Even very large suppurating buboes of both groins are healed in a couple of weeks in this way.

The statistics of tracheotomy are quite favorable. Diphtheria is endemic in Hamburg, and during last year 157 tracheotomies were performed, of which sixty-nine recovered. I have seen as many as six tracheotomies performed in one day. The after treatment is the usual one, spray with salicylic acid. Dr. Max Schede is a rapid, but careful and elegant operator; he has especially an astonishing control over the bleeding, ably assisted by his corps of assistants.

I saw him a few days ago remove the scapula on account of a relapse of sarcoma after previous exarticulation of the arm. During the whole operation, with complete dissection of the axilla and ligature of all the large vessels, scarcely one ounce of blood was lost.

The enormous material found in the hospital, combined with the cordial reception and polite attention paid to visiting strangers makes the stay in Hamburg not only very profitable, but exceedingly pleasant, and I cannot strongly enough advise American physicians, sojourning in Europe, to take advantage of the rich opportunity for study which is found "im Algemeinen Krankenhause."

Truly yours,

HERMAN MYNTER, M. D.

BOOKS RECEIVED.

From Lea Brothers & Co., Philadelphia:
  Science and Art of Obstetrics: THEOPHILUS PARVIN.
  Operative Surgery: STEPHEN SMITH.
  Clinical Diagnosis: JAMES FINLAYSON.
  Diseases of the Joints: HOWARD MARSH.
From Wm. Wood & Co., New York, through J. H. Matteson, Buffalo:
  Reference Handbook. Vol. IV.

WANTS, EXCHANGES, &c.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

The Medical Press
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A SERIES OF TWENTY-FIVE LAPAROTOMIES.

By Matthew D. Mann, A. M., M. D.
Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo.

From January 1, 1886, to February 15, 1887, the writer has performed in all twenty-five abdominal sections. The cases may be divided into five distinct groups.

I.	Exploratory incision	1.
II.	For removal of ovarian tumors	17.
III.	For removal of ovaries not the seat of tumor	4.
IV.	For removal of tumors of the uterus	2.
V.	For intestinal obstruction	1.

In Group II., in one of the cases, a uterine fibroid was removed as well as two ovarian tumors, so that Group IV. might properly be increased by one. In but one case was there a failure to complete the operation, and only one case proved fatal. The other cases all made good and complete recoveries. As we often learn more from our failures than from our successes I will relate the two unsuccessful cases in detail.

Group I. *Case 53.*—This case was of very great interest to me as illustrating how absolutely impossible it is to tell the state of affairs within the abdominal cavity without opening it. The patient was sixty-nine years old, and came to me first in September, 1885. She stated that six months before she had had inflammation of the bowels, and following this she noticed a tumor in the abdomen. This had grown quite rapidly, and gave her a good deal of pain and trouble. There was a hard, irregular tumor, the size of a large fist in the lower part of the abdomen, which seemed to be freely movable within the peritoneal cavity. As it apparently was not adherent, and had a long pedicle, I suggested an exploratory incision and removal of the tumor if it could be done without too much risk.

The operation was not done until September 29, 1886. The tumor had grown somewhat in the interval and gave a good deal of pain at times. The abdominal walls were very loose, flabby and thin, and the tumor could apparently be rolled around within the cavity. I made an incision in the linea alba, and continued on layer by layer looking for the sub-peritoneal fat. The patient was not emaciated but fairly well nourished for one of her years. One tissue I at first took for the peritoneum, although it had no fat over it, but cutting through it found a fatty layer which I was certain was the subperitoneal layer in question. Cutting through this I came upon peritoneum closely adherent to it. The peritoneum seemed unusually thick, but on incising it I came to an open space which I of course supposed was the peritoneal cavity. Passing my finger into it I found that I was within the small intestine. The fatty layer was omentum, and the peritoneal cavity had been obliterated by the previous peritonitis, and the tumor instead of being free was fast everywhere. I freed a small portion of the surface of the intestine, brought it together and closed the wound. There was no after trouble. The temperature did not go above 99°, and she left for home none the worse for the operation, and content to pass the remainder of her days with the tumor.

This is the only time I can remember to have seen the sub-peritoneal fat entirely wanting. The apparent mobility of the tumor, which was so very deceptive, was largely due to the great laxness and thinness of the abdominal walls. What the nature of the tumor was I do not know, but it felt like a fibroid.

GROUP II. *Case 39.*—This patient had a fifteen-pound ovarian cyst which was easily removed and the pedicle tied and dropped. She reacted nicely and bid fair to make a good recovery. The temperature on the second evening reached 102.4°. The next morning it was below 100° and did not rise again until the 27th day. On the 12th and 13th days it was perfectly normal. The pulse also kept at about 100, a little above the average rate (see table), but near where it had been before the operation. During the first few days she had some pain which was quieted by morphine. Also, some vomiting, but this was not constant or persistent. On the fourth day she took solid food and had very little pain. Gas passed freely from the bowels after an injection of asafœtida. On the 5th day a cathartic and two enemaes were given with the effect of producing a free movement of the bowels. On the 7th and 8th days there was a great deal of intestinal pain. There was a good deal of trouble in getting the bowels moved, but again on the 11th day they were thoroughly emptied. She sat up; was free from pain; ate a good dinner and seemed to be perfectly recovered. On the 12th day she was moved to a private room in the hospital. She was then able to walk about the room, and seemed to be entirely well. The next day she was not so well—some vomiting and intestinal pain. After this the difficulty in getting the bowels to act increased, though it could be done by the use of powerful cathartics and enemas. Her temperature went below normal, and she finally sank and died on the 28th day after the operation.

An autopsy showed a loop of intestines firmly attached to the pedicle and a mass of intestines bound to this loop and to each other by adhesive peritonitis. There was no actual obstruction but a part of the gut was gangrenous. I was several times tempted to reopen the abdomen and try and straighten out the obstruction, but there never seemed a clear indication for such an operation; for, even on the day on which she died she had a large movement from the bowels. How to avoid such complication is a most difficult question in the after treatment.

Since this case I have always tried to get the bowels moved on the second day, but this is often very difficult to accomplish as the patient is nauseated and enemata do not always suffice.

Among the other ovariotomies there were several of considerable interest. *Case 36* was only sixteen years old and the tumor had been diagnosed as pregnancy by a general practioner of the "new" school. The operation was easy, but there occurred an extensive cellulitis in the pedicle which protracted the convalescence to nearly five weeks. The swelling in and around the pedicle finally all disappeared, and she made a perfect recovery. In *Case 41* the same thing occurred. *Case 38* was an undoubted fibroid of the ovary with much ascites. The operation was easy and recovery perfect and prompt.

Case 40—was exceedingly difficult, as the tumor had existed for a long time, and adhesions were very strong and numerous. It took nearly one hour to separate the cyst from its attachments, and many ligatures were left in the abdominal cavity. After she went home she had a slight attack of peritonitis, but is now perfectly well.

Case 43—was also a very difficult and interesting case. The tumor was quite small, with very thin walls and firmly adherent in the pelvis. It was only after a great deal of eneucleating and tearing that it could be brought up enough to tie. The abdominal walls were very fat and rigid. She recovered except that an abscess formed deep in the pelvis. It fortunately broke through the abdominal wound. A sinus formed and exists to this day, and I am at present trying to induce it to heal. The patient's general health is perfectly good, and she is entirely free from the severe pain which formerly rendered her life a burden.

Cases 45 and 47—were cysts of the broad ligament or par-ovarian cysts, filled with clear water; with thin walls. The operation for their removal only took a few minutes, and recovery was rapid. The diagnosis of such cysts is usually easy. The walls are thin and flaccid, fluctuation very marked, and the patient's general condition does not usually suffer much. Both these cases had been diagnosed as ascites, a mistake which, I imagine, is very common.

The other ovariotomies were average cases, and presented no points of special interest except *Case 60.* Here the diagnosis of multilocular ovarian cyst was made and proved correct. There were two ten-pound tumors which were easily removed. The contents were very thick, almost like cold glue, and it was necessary to empty the cysts with the hands as the stuff would not run. The cyst walls were very thin and ruptured, allowing a certain amount of material to get into the peritoneal cavity; so I washed out the cavity with water at 105°. I found a fibroid as large as a fist deep behind the uterus. It was attached to the fundus uteri by a short thick pedicle. I put on the clamp and cut off the tumor. She has made a good recovery, and is cured of her retroversion as well.

Group III.—The removal of ovaries and tubes not the seat of tumors may be one of the simplest or one of the most difficult operations in abdominal surgery. In my hands it has been unsatisfactory, as the history of the cases in Table 2 will show. The number of cases is too small to admit of any general deductions.

Case 44—had been suffering from severe pain in the ovarian region for six years. There was no evidence of pelvic inflammation, and the ovaries could not be touched. I sewed up a badly lacerated cervix, a year later no improvement having occurred, and her trouble having resisted a long course of electricity, counter irritation, forced feeding and massage with other appropriate treatment, I removed the left ovary. The ovary was small and non-adherent, and the operation was exceedingly simple. She made a very good recovery, and for a few weeks was entirely relieved of pain, but it soon came back in another place, and although not quite so severe, she is by no means cured.

Case 46.—This patient was in the hospital ward for a long time. There was a history of long continued uterine disease. The uterus was somewhat retroverted and there was prolapse of the left ovary with old pelvic peritonitis. Dysmenorrhœa was severe and getting worse month by month. I removed the ovary and tube with some difficulty as they were firmly adherent. The other ovary I left alone as it was not at all diseased, and I had promised her faithfully to do so if I found it healthy. She slowly improved after this operation and left the hospital much better; but from a recent letter I learn that the cure is not complete and that she still suffers somewhat at her periods. Perhaps the mistake was in not removing both ovaries.

Case 56—was brought into the hospital for intoxication which she said was induced by alcohol taken to relieve pelvic pains. The ovaries were both prolapsed, double their normal size, exquisitely sensitive, and firmly bound down in the pelvis. A long course of treatment failed to afford the slightest relief. She was a pauper, unable to work, and as a last effort at becoming self-supporting she consented to removal of the tubes and ovaries. They were removed with difficulty, and she made a good recovery. She still complained of pain, but the old intense pain in the pelvis was relieved. I have lost sight of her and do not know the ultimate result.

Case 58.—This patient had been a sufferer for years with a large mass of exudation on each side and behind the uterus. I diagnosed pelvic peritonitis with involvement of ovaries and tubes. The right ovary and tube were adherent, but removed without much difficulty.

The tube was distended with fluid to the size of a large thumb. The left tube was distended so as to hold two ounces of fluid. It burst and I did not succeed in getting it all out. The ovary on that side was deeply buried in a mass of adhesions, and I found great difficulty in removing it, but finally succeeded. She made a fair recovery, but there was some inflammation on the left side, and there is now a mass of exudation larger than before the operation. She has a good deal of pain and is steadily losing ground. Before the operation there was a trace of albumen in the urine, but soon afterwards the action of the kidneys nearly ceased and the amount of albumen largely increased. The albuminuria continues intermittently up to the present, sometimes as much as one-third albumen being found. Evidently the kidneys are affected, and the possible benefits of the operation will be lost on this account.

This is certainly not a very encouraging experience, and from some cases which I have seen, where similar operations had been performed by others, I know it is not unique. In future in cases seeming to demand this operation I shall give a very guarded prognosis as to the ultimate cure. I am also doubtful as to the propriety of removing only one ovary.

GROUP IV.—I have so recently written a full account of the cases in this group* that a few words here will suffice.

Case 50—was a medium-sized fibroid growing from the fundus uteri. It caused great pain and suffering, and the patient was willing to run any risk for the sake of getting rid of it. I removed it, treating the pedicle with a clamp, and she made a good recovery and remains perfectly well.

Case 54—was of a similar nature, only that a symmetrical enlargement of the body of the uterus made up the tumor. There was an abscess cavity in the tumor, which contained two quarts of pus. I did supra-vaginal hysterectomy, and the patient made a good recovery. She writes me that there is still a sinus leading from the abdominal wall in front through into the vagina. As there is no discharge coming from it, I do not imagine that it will do any harm, and could probably be easily closed.

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* *Am. Jl Obstet.*

GROUP V.—The single case in this class does not properly belong to a gynecologist, but as I went a long distance to see her, and as she had formerly been a patient of mine, I decided to operate, though I prefer not to go outside of the pelvic organs in my work. She was a strong young woman who had not had a movement from the bowels for two weeks or more; the time was not known exactly. Cathartics and injections had failed. There was great pain and tenderness over the abdomen, moderate distension but no distinct tumor. There had been fœcal vomiting for several days, and no food had been retained. The pulse was rapid and temperature elevated. I opened the abdomen and passed the entire intestinal tube through my fingers from the duodenum to the colon. As the intestines were removed from the abdomen they were enveloped in warm carbolized cloths. As I approached the ileo-cecal valve the intestine was much distended, and I thought there was trouble there, though I could not detect any distinct obstruction. In order to admit of emptying the bowels, as I felt sure there must be some obstruction in the colon, I drew a knuckle of intestine into the lower angle of the abdominal wound and sewed it there after the abdomen had been closed, and in it made a very small artificial anus. She recovered rapidly. There was an immense amount of fluid fœcal matter discharged through the artificial opening. After a week or ten days she had a natural movement, and the amount passing by the wound diminished. Gradually the opening grew smaller and finally, after the failure of several attempts to close it by plastic operations, closed by itself entirely. The patient is now perfectly well and acting as nurse in a hospital.

What the obstruction was, I do not know, but I am certain that had no operation been done she would not have lived many days. Whether the making of an artificial anus under these circumstances is generally justifiable I will not attempt to decide, but the result in this case was certainly satisfactory.

The last few years have seen a great change in the results obtained by American laparotomists. Up to that time there was a tendency to the opinion that something in our climate, the peculiar nervous organization of our women, or some unknown condition prevented our obtaining the results, more especially in ovariotomy, so generally obtained in Europe, particularly in England.

With the advent of a younger set of operators, trained in more perfect methods and operating under better conditions, this has been shown to be a mistake, and the fact has been established that in America, the birth-place of abdominal surgery, as good percentages of recovery can be obtained as anywhere else.

The fault in the older bad results was with the operators and their methods, and not with the women and the climate. This may seem a bold statement, but it can be proved by facts. Take for instance the tables of ovariotomies by American operators, lately published in the *Pittsburgh Medical Review.* We can there select 100 cases operated upon in 1886 by twelve different operators, a consecutive series in each case, with only eight deaths. This is a showing as good as can be found anywhere, and is better when we consider that of the twelve reporters nine had no deaths, the fatal cases being charged four to Dr. Homans, three to Dr. Goodell, and one to the writer, these three operators having the majority of the one hundred cases. Not one of these deaths was from sepsis or any strictly preventable cause; several of them were desperate cases, and died on the table.

Still there is room for improvement, and it remains for the general profession to do their part more perfectly, and this they can do by following Mr. Lawson Tait's advise in a recent number of the journal referred to. He says:

"But I must point out to you, as a set-off against this, that the main element of success in such a line of practice, as in almost any other of a similar nature, is that it should fall into the hands of a few men, and that it should not be dabbled in by any man who may happen to have a case. The publication, therefore, of such tables will show how essential for success it is that the work should be limited in the operators. The whole profession will on your side of the Atlantic, as already with us, soon come to regard it as a matter not only of necessity and right, but as being of the first and highest interest to every member of their profession, that such means should be taken as will contribute in the greatest degree to the best interests of the patients. This is the line upon which alone we can advance the profession to which we are all attached."

Certainly there is reason in this. Specialists do not like to urge it upon the profession because their motives are likely to be impugned. The more I operate the more convinced I am that experience counts for more in laparotomy than in any other branch of surgery. Success depends so much on nicety of detail, as well as on being prepared to meet the most unexpected and unlooked for complications, that only a large number of operations can put a man in a position to be considered as an expert. Unless the profession will uphold the hands of those who have given themselves up to this work the best results cannot be obtained.

Another way in which the general profession may greatly aid the operators, is in sending their cases early for operation. I think it may be laid down as a rule that every ovarian cyst should be removed as soon as it is discovered, unless there is some special reason for not doing so. The old idea that a certain length of time is necessary in order to harden the peritoneum and get it ready, so to speak, is fallacious. The peritoneum is one of the most tolerant of tissues of everything but dirt. Keep it clean and you can do anything with it. This is proved by the almost uniform success of such operations as removal of the ovaries, where there is no tumor. Early operations are as a rule much simpler and less dangerous, being less likely to be complicated by adhesions and are done in patients better fitted to stand the shock. Nor is this the only consideration. A woman with an ovarian tumor is in constant danger. Rupture of the cyst, peritonitis, suppuration of the cyst, and hemorrhage into the cyst, are all accidents which I have seen occur in comparatively small cysts. I once put a patient on the table to operate, only to find that the cyst had ruptured the night before. A small cyst, too, of only five pounds; peritonitis had already begun, but she recovered.

As to tapping I am happy to say that it is rapidly going out of date; though only last week I heard of a case now dying of septicæmia due to suppuration of the cyst following tapping; and this same accident I have seen follow several times, though not in my own practice. Tapping a multilocular ovarian cyst is fully as dangerous as an operation or even more so.

A few words as to my own methods may not be without interest. All the operations are done with careful attention to the rules of

(TABLE 1.)

OVARIOTOMIES.

No.	Date of Operation.	Age	Married or Single.	No. of Child'n.	No. of Tappings.	Time since first noticed	Size and Nature of Tumor.	One or Both Ovaries.	Adhesions.	Treatment of Pedicle.	Drainage.	Hospit'l or Private.	Result: (Recovery or Death.)	Remarks.	Family Physician.
36	Jan. 11, '86.	16	S.	0	0	15 mos.	12-lb Multiloc.	One.	None.	Tied and Burnt.	None.	H.	R.	Cellulitis in Pedicle.	
37	Feb. 10, '86.	29	M.	1	0	4 mos.	7-lb. Multiloc.	One.	None.	Tied and Burnt	None.	H.	R.		Dr. H. D. Walker.
38	Feb. 18, '86.	54	M.	10	0	3 yrs.	5-lb. Solid Fibroid.	One.	None.	Tied and Burnt.	None	H.	R.	Ascites.	Dr. J. C. Green.
39	Feb. 25, '86.	48	M.	9	0	8 mos.	15-lb. Multiloc.	One.	Slight.	Tied and Burnt.	None.	H.	D.	Obstruct'n of bowels	Dr. D. W. Harrington
40	Mar. 25, '86.	56	M.	6	0	4 yrs.	40-lb. Multiloc.	One.	Extensive, firm.	Tied and Burnt.	None.	H.	R.	Difficult One.	
41	April 8, '86.	18	M.	0	0	2 yrs.	22-lb. Multiloc.	One.	Slight.	Tied and Burnt.	None.	H.	R.	Cellulitis, slight.	
43	May 5, '86.	34	M.	0	0	18 mos.	½-lb. Multiloc.	One.	Firm, Pelvic.	Tied and Burnt.	None.	H.	R.	Deep Abscess.	
45	May 19, '86	59	S.	0	0	18 mos.	20-lb. Par-ovarian	One.	None.	Tied and Burnt.	None.	H.	R.		
47	June 2, '86	37	S.	0	0	6 yrs.	29-lb. Par-ovarian	One.	None.	Tied and Burnt.	None.	H.	R.		
48	June 12, '86	28	M.	1	0	4 mos.	10-lb. Monocyst.	One.	None.	Tied and Burnt.	None.	H.	R.		Dr. D. W. Harrington
49	June 18, '86.	56	M.	6	0	8 yrs.	20-lb. Doublecysts	One.	None.	Tied and Burnt.	None.	H.	R.		Dr. H. Wilson.
51	Sept. 27, '86.	57	S.	0	0	16 mos.	8-lb. Monocyst.	One.	None.	Tied and Burnt.	None.	P.	R.		
52	Sept. 28, '86.	53	M.	13	0	9 mos.	13-lb. Multiloc.	One.	None.	Tied and Burnt.	None.	H.	R.		Dr. A. M. Barker.
55	Oct. 14, '86.	57	S.	0	1	3 yrs.	30-lb. Multiloc.	One.	None.	Tied and Burnt.	None.	H.	R.		Dr. J. P. Colgrove.
57	Oct. 28, '86.	21	S.	0	1	6 mos.	9-lb. Multiloc.	One.	None.	Tied and Burnt.	None.	H.	R.		Dr. T. Clark.
59	Jan. 13, '87.	25	M.	0	0	2 yrs.	9-lb. Multiloc.	One.	Omental.	Tied and Burnt.	None.	H.	R.		Dr. G. D. McCullum.
60	Feb. 13, '87.	48	M.	1	0	5 mos.	20-lb. Multiloc.	Both.	None.	Tied and Burnt.	None.	H.	R.	Fibroid of Uterus. Removed same time.	Dr. J. H. Sutherland.

(TABLE 2.)

LAPAROTOMY FOR REMOVAL OF OVARIES NOT THE SEAT OF TUMOR.

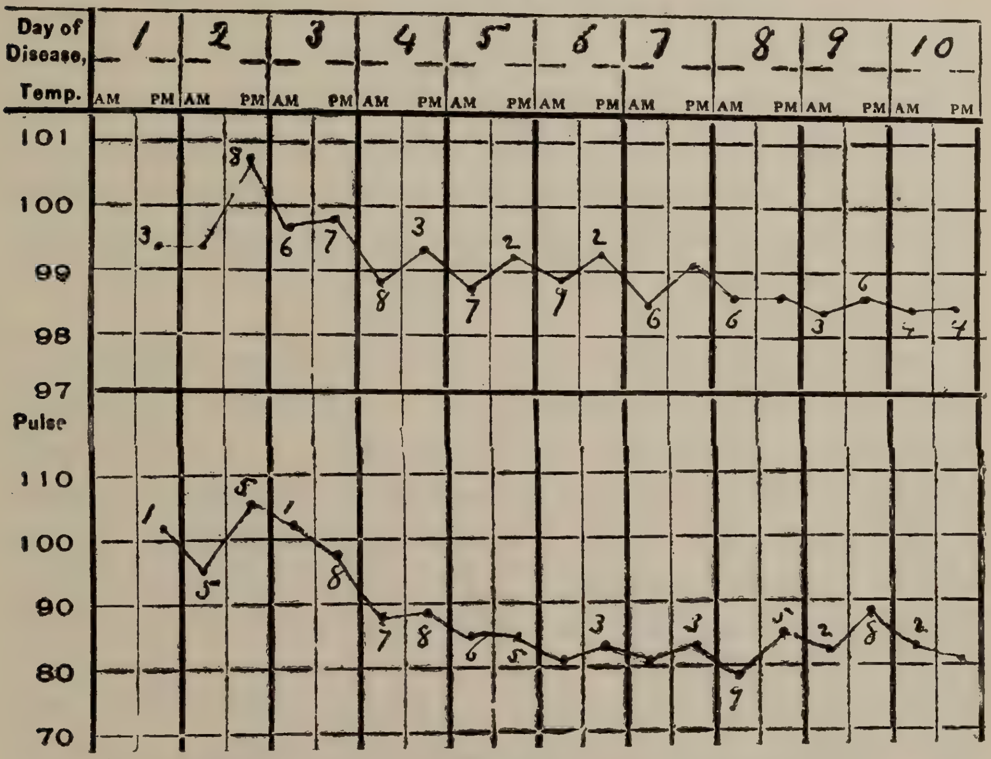
No.	Date of Operation.	Age.	Married or Single.	No. of Children.	Duration of Disease.	Pathological Condition or Symptoms necessitating Operation.	One or Both Ovaries.	Adhesions.	Treatment of Pedicle.	Drainage.	Hosp't'l or Private.	Result of Oper. Recov'y or death	Effect of Operation upon the condition requiring it.	Family Physician.
44	May 12, '86.	43	M.	0	6 years.	Ovarian Pain.	One.	None.	Tied, dr'pp'd	None.	H.	R.	Temporary improvem'nt	Dr. W. H. Gail.
46	May 27, '86	27	S.	0	4 years.	Pelvic Peritonitis, with Prolapsus of Ovary.	One.	Extensive.	Tied, dr'pp'd	None.	H.	R.	Improvement—permanent to date.	
56	Oct. 21, '86.	25	S.	0	2 years.	Pelvic Peritonitis, with Prolapsus of Ovary.	Both.	Extensive.	Tied, dr'pp'd	None.	H.	R.	Improvement—permanent to date.	
58	Jan'y 6, '87.	34	M.	0	Several "	Pelvic Peritonitis and Salpingitis Ovaritis.	Both.	Very dense.	Tied, dr'pp'd	None.	H.	R.	None.	Dr. Ashley.

(TABLE 3.)

LAPAROTOMY FOR OTHER PURPOSES THAN THE REMOVAL OF OVARIES.

No.	Date of Operation.	Sex.	Age.	Duration of Disease.	Pathological Condition or Symptoms necessitating Operation.	Nature of Operation.	Drainage.	Hospital or Private.	Result of Operation: (Recovery or Death)	Effect of Operation upon the condition requiring it.	Family Physician.
42	April 17, '86.	F	28	2 weeks.	Intestinal Obstruction.		None.	P.	R.	Cure.	Dr T. S. Thomas.
50	June 22, '86.	F	42	1 year.	Fibroid of Uterus.	Supra-Vaginal Hysterectomy.	None.	H.	R.	Cure.	Dr. D. D. Loop.
53	Sept 30 '86.	F	69	18 mos.	Solid Tumor.	Exploratory Incision.	None.	P.	R.	No Effect.	Dr. E. S. West.
54	Oct. 7, '86.	F	38	8 years.	Fibroid of Uterus.	Supra-Vaginal Hysterectomy.	None.	H.	R.	Cure.	Dr. E. Rood.

The temperature runs generally higher in young people than in those over fifty. The tables which are appended give the principal points of all the cases.



COMPOSITE PULSE AND TEMPERATURE CHART—THE AVERAGES OF TEN CASES.

The highest temperature was 102.5° on the second evening, and the highest pulse was 145; the next highest being only 122.

OXLEY'S SUGGESTED ALTERATION IN THE COMPOUND LIQUORICE POWDER.—"Having found that the above preparation produced very severe griping in many instances where I had ordered it, the griping being particularly severe in some of my younger patients, I have ordered the following formula for some time past, in which anise fruit is substituted instead of the fennel, and one-fourth part of ginger is added. The altered formula runs thus: Senna and liquorice-root, of each, two parts; anise fruit and sulphur, of each, one part; sugar, five and three-fourths parts; ginger, one-fourth part. This altered preparation is quite as satisfactory in its laxative properties, is less liable to gripe, and is as pleasant to take as the officinal powder, and I would suggest its trial in cases where the powder as now prepared produces the disagreeable effects to which I have referred."—*Lancet, Oct. 2, 1886.*

RESEARCHES INTO THE PATHOLOGY OF INSANITY.

BY THEODORE DEECKE.
Special Pathologist to the N. Y. State Lunatic Asylum at Utica, N. Y.

[Read before the Utica Medical Library and Journal Association, March 7, 1887.]

The subject of the pathology of insanity, in a physical sense, would include the researches into all disease manifestations that are observed in connection with insanity, or the phenomena of impaired or perverted mental life. More strictly they should be limited to those characteristics of the latter. But the one cannot be very well separated from the other.

When the subject was first taken up as a matter of scientific research, the most widely differing views were expressed as regards the utility and possible results of such investigations. On the one side, the whole undertaking was ridiculed as an imposition. The presumption that mental life of man was influenced by physical causes, or mind action actually altered by physical disorders, was held to be untenable. Derangement or perversion of mind, it was asserted, has its true origin in the abuse or misuse of freedom. Insanity was regarded as the manifestation of a soul laden with sin, of a soul that willingly had sunk into the abyss of psychical darkness and disease, or of one which openly exhibited the continuous struggle between reason and the passions of man, independent of all bodily weakness, infirmities and ailments. On the other side the most sanguine hopes were entertained that it would not be difficult to bring an affection so well-marked as insanity, and so expressive of disturbances in the whole nervous system, face to face with even gross and extensive changes at least in the central organs supposed to be engaged *par excellence* in all nervous as well as mental operations and phenomena. The value of these hopes, it is true, was somewhat impaired by the fact that so little was known in detail of the physiological organization of the brain. Attention was also called to the frequent failure in detecting evidences of morbid change at the autopsies of persons who had died insane. And on the other hand it was shown that severe and destructive morbid processes may occur and leave unmistakable traces behind in the encephalon, without being associated with manifestations of intellectual debility, not to speak of pronounced insanity. Both statements, of course, were considered of greater weight by the laity than by the professional student. The negative one could properly be regarded as only tantamount to a confession of ignorance, which imperatively demanded further investigation; while the latter was not by itself inconsistent with the maxim that there was no insanity without physical disease. It was, therefore, not surprising that by the combined efforts of earnest workers in all civilized countries of the world the clinical as well as anatomical material rapidly increased, upon which the present doctrine of the physical basis of insanity is founded.

Some harm, in my opinion, was done the new science, which prevented the speedy and general acknowledgments of its results, by the absence of a common plan according to which investigations were to be conducted, but still more by the numberless inconsiderate speculations and premature, bold generalizations which soon became its unwished-for associates. There is and ever has been, as history teaches, nothing more detrimental to the correct estimation of physical study than the latter, and there is nothing that so restrains uniform progress in a new field of research as the lack of a proper and judicious division of labor. In this connection it is indeed to be regretted that a special organ was not founded early in study of psychological pathology, the pages of which would have been entirely devoted to the registration and discussion of this branch of science. As matters stand to-day it has become impossible, and will be so for some time to come, to elaborate an intelligent review of that which has been accomplished and is worthy to be placed on record. I have had access for more than the last twenty years to almost the entire original material published in England, France, Germany, Italy and this country. The first and larger half of this period is distinguished and made conspicuous by the quiet, diligent and unprejudiced collection and registration of facts. The progress was slow but steady, which will not surprise us when we remember that comparatively little was known before that time of the true macroscopic topographical anatomy of the brain, the cord and their appendages, and nothing definite of the histology and the minute structure of these organs. Even the structure and the relation of the enveloping membranes to the organs themselves were unexplored, as well as the peculiarities of the vascular arrangements in these parts of the body. The knowledge of pathological conditions was almost confined to the hydrocephalic processes, purulent infiltrations, softening of tissues and abscesses, apoplectic cysts, calcifications of the main supplying arteries, thromboses and the formation of tumors, the nature and origin of which were veiled in obscurity. In order to proceed in this direction with success new instruments and new methods of investigation had to be invented and employed, and frequently changed or replaced by others. Much labor, time and material were lost, but the results were in the main encouraging and satisfactory.

If these labors had been governed throughout by the same scientific and industrious spirit which prevailed at their own commencement we would no doubt be more advanced in our knowledge at the present day. Thus the anatomical and histological exploration of the spinal cord and the study of the nature and localization of the various pathological processes in affections of the cord, brought face to face with close clinical observations, have accomplished more to elucidate its physiological organization than direct physiological experimentation. The same result was expected to be derived from a similar course of investigation in brain pathology. Unfortunately this course, at least in part, experienced a severe interruption by the minds of many of the best co-laborers becoming absorbed by studies in another direction which seemed to promise hitherto quite unexpected results.

I refer here to the investigations into the so-called localizations of brain functions by direct experimentation upon the organ. The value of the results of these experiments, interesting as they are, has been greatly overrated by the investigators themselves, who are not always correct, often being premature, and prejudiced in the interpretation of the phenomena observed. The determination of a distinct line of demarkation between symptoms produced by the simple interruption of continuity in certain sensory and motor tracts and those exhibiting an actual defect in the intellectual sphere in animals, is indeed a difficult task. The disparity of opinion in this respect among different experimentalists is not surprising. This is made more apparent by the fact that in all cases of artificial lesions produced on the surface of the hemispheres of the brain, there has been given no guaranty that the gray layer of a convolution can be removed, destroyed or excited without at the same time removing, destroying or exciting the terminations of the white conducting fibers in this layer. For there exists anatomically no line of demarkation between the two layers. Locally in the same delicate frame-work of neuroglia tissue are imbedded the final ramifications and terminations of both the white fibers as well as of the basal processes of the ganglionic cells. Even with the highest defining magnifying powers in the most delicate microscopic sections, assisted by the employment of various methods of double staining, I have not been able to distinguish the ultimate terminations of both of these elements from each other, although I am convinced that there exists no direct continuity between them. Each of the finest processes at its end is provided with a small globular body of larger diameter than the fibril itself, forming a kind of an intumescence of the latter. The parts are so minute, however, that it cannot be decided by measurement or comparison whether it is a gradual enlargement of the fibril, a bulb or a spherical knob.

Considering these histological facts, therefore, it can safely be asserted that all that has been hitherto claimed for the theory of localization has been narrowed down to this: that a number of sensory and motor tracts from their peripheral expansions, sensitive surfaces, or from voluntary muscles, have been traced experimentally up to certain terminal regions, or places located in the gray cortical substance of certain convolutions of the brain. But it has neither been shown nor made probable that the latter are the points where the mind receives or perceives, or is set into action. For our purpose, the localization of mental function—if such a thing exists, or even is conceivable—the above facts are absolutely inapplicable. From a simple mechanical point of view I think the most wonderful apparatus which mind-powers can set into operation is a very imperfect machinery; perhaps nothing more than a kind of a harp or a pianoforte, unless *every* portion or point of it *from* every other point can *ad libitum* be set into action. Such provisions for universal connections in the organ itself must exist aside from the central termination of peripheral nerve expansions.

In these the power is generated and converted, while the latter are the effluent and affluent canals for localized functions, but not to be regarded as centers in the sense of psycho-physical stations or offices for the use of his majesty, the Mind.

The conclusions drawn from those artificial experiments on animals have, in fact, taught us no more than has long been known from the clinical study and observation of natural experiments, as they daily occur in the form of motor and sensory paralyses arising from local cerebral hemorrhages, exudations or other injuries to the brain.

For the purpose of elucidating any phenomena associated with insanity this theory of localization of brain function is as insufficient as for elucidating any mode of mental operation or manifestation in general. It is of the same value as the recognition of the results of the above-mentioned natural experiments in certain stages of the attacks when it becomes associated with decided motor and sensory disturbances. But even the nature of these in the insane points, like the whole affection itself, to the existence of more or less diffuse morbid processes.

Even the facts derived from pathological observations of the relation of localized lesions in the brain to disturbances of speech are as readily explained by assuming a breech of continuity in the conducting inward and outward tracts, as by the destruction of the center or the centers of speech, in the sense that this particular faculty of the human mind of converting thought into language, or *vice versa*, is confined to psycho-physical processes, or operations occurring solely in certain definite convolutions of the brain.

Theoretically, there is little in conformity with actual experience and observation to warrant the claim of some alienists, as for example, Meynert in Vienna, that the complexity of mental symptoms constituting insanity arises from disease of the anterior brain *par excellence*. It is neither justifiable by existing anatomical conditions and relations, nor by *post-mortem* evidences in cases of insanity, to make such a distinction. The question whether localized lesions in the brain, which are productive of disturbances in the censory or the motor sphere, ever exist without being associated with any impairment of mental function has not yet been universally decided. The close observer, as far as my experince goes, has always answered the question in the negative. On the other hand grave lesions in which all symptoms characteristic of insanity had to be excluded, are of daily occurrence.

Insanity, therefore, seems to be evidence of diffuse brain affection. The question, however, whether in all cases of mental disturbance, those of transitory nature included, palpable or demonstrable organic changes are connected with the affection must at present remain undecided. From analogy the assumption of the existence of so-called purely functional diseases, even of the nervous system, would not seem tenable. Yet, since nervous function itself, as far as its nature is accessible to physical observation and experimentation, seems dependent upon merely molecular and chemical processes which do not palpably affect the morphological exterior of the nerve, the possibility of the existence of abnormal, molecular and chemical processes cannot be denied. They would seem to be demonstrable sole by their effect or perhaps by alterations observable in the behavior of the parts affected to electric energy or chemical reaction.

As regards the task and the accomplishments of pathological research in connection with insanity, there remains still an error to be corrected, which, unfortunately, has found its way into the public at large, and has done a great deal of harm. That is the popular belief that it was the special aim of these investigations to discover the morbid products in the dead organ which correspond to the symptoms manifested by the insane during life. The same idea, indeed, was expressed in the pages of a scientific medical journal in the following words: "That it should be in the future the task of pathological research in case of psychical derangement not only to accurately localize the disease, but also to explain from the seat of and the nature of the lesions the symptoms which marked the case *intra vitam.*" I have often thought and do believe that the inventors of this phrase never have been fully conscious of its whole bearing. Translated into common language the meaning would be about synonymous with the belief that insanity, this inextricable complexity of perverted mental symptoms, or its physical equivalent, could be demonstrated in all its varieties on the dead brain by the use of magnifying glasses as a palpable something, comprehensible to everybody, or that it could be exhibited to everybody reproduced by microphotographic representations.

All this is of course nonsense, and has never been in fact the aim of any scientific research. Another question, however, is whether there are any prospects or any reason that we will ever be able to say that, for example in acute delirium, in case of death we shall find lesions of this nature, or in connection with melancholia of that nature, or in paralytic insanity, or in chronic dementia, a characteristic pathological change, destruction or transformation of tissue? This not only will be, but in part already has been realized, for it is the result of the most careful explorations of the various morbid processes to which the brain as well as any other organ of the body may fall victim.

In the detailed description which I have to postpone, and intend to present in another article, we shall meet with morbid conditions and processes analogous to those observed in other parts of the system, but modified by peculiarities arising from the nature of the tissues involved. Others will differ in development and course, for no other organ offers in the relation of three main morphological elements, the parenchyma, the circulatory system, the connective substance to each other, so many variations and differences in arrangement, which have to be taken into consideration. The circulatory arrangements are unique and must be thoroughly understood in order to get a clear insight into their mode of participation in different stages and forms of disease. Not less peculiar by themselves are the cells of the parenchyma, the structure of the nerve fibers and the connective tissue in its various forms.

THE proportions of the different colors in eyes among the people of Italy are thus estimated by Prof. Mantegazza: Black eyes twenty-two per cent.; chestnut, sixty-four; blue, eleven, and gray eyes, three per cent.

PROF. L. WEBER mentions a stroke of lightning in Germany which broke a window-pane and forced a jet of water through the aperture upward to the ceiling, part of which it detached. Three bucketsful of water were afterwards taken from the room.

ACUTE PERICARDITIS IN CHILDREN.

BY HAMILTON S. QUINN, M. D.
Utica, N. Y.

[Read before the Utica Medical Library Association.]

A paper for this evening, made up of little that can lay any claim to originality, but of much that has been pilfered from the writings of Bartholow, Delafield, DaCosta, Henoch, Loomis, Ellis and others, and given a new dress under the heading: "One Form of Acute Pericarditis in Children."

By the term Pericarditis we mean an inflammation which may involve the parietal or the visceral portion of the serous membrane known as the pericardium; a part of the one or of the other, or the whole of both.

The cause of such an inflammation may be traumatism, pneumonia, pleurisy, caries of the bones of the chest, cardiac inflammation, but especially rheumatism. The disease also occurs during the course of scarlatina, variola and in albuminuria, etc. But cases supposed to be due to cold are, as a rule, met with in patients suffering from albuminuria.

Be this as it may in children, under twelve years of age, rheumatism stands pre-eminently first as a cause of acute pericarditis with the effusion of fibrin and serum. As a result of acute pericarditis we may have an exudation of fibrin or of serum alone, or, more commonly, an exudation of both fibrin and serum,—the sero-fibrinous being the rule in children, though any exudation may become purulent, and we may even have one which is purely hemorrhagic.

As stated, the exudation in children is, as a rule, one of fibrin and serum, and this exudation, save in very rare cases, is absorbed. No organization of portions of the exudation having taken place, no adhesions are left behind. This form—the sero-fibrinous—is the one under consideration to-night, and the object of this paper is to bring under discussion acute pericarditis with the effusion of fibrin and serum as met with in children under twelve years of age, and as being due to the same cause as that to which acute articular rheumatism is due, but as not being, in any way, a mere complication of the latter disease.

In children under the age stated, well-marked acute articular rheumatism is not so very frequently met with, and yet acute pericarditis due to the same poison,—if I may call the cause of acute articular rheumatism a poison—is quite as or more frequently met with in children under twelve than in those older, or even than in adults. Granting this or not, it is a fact that the slightest manifestation of rheumatism in young children,—such as many of the so-called "growing pains"—may be preceded, accompanied or followed by acute pericarditis with the effusion of fibrin and serum. Such a cause and such an acute pericarditis in children under twelve may give us as results and symptoms: Urine acid in reaction, a convulsion or severe chill, vomiting, pain in the region of the heart, or in almost any region of the chest or abdomen, which pain may shoot down one or other arm, or down both. Also, an elevation of temperature, even as high as 105 or 106, a heart action which is rapid and often irregular, and a cardiac impulse which may be heaving. Moreover, we have rapid breathing, and we may have cough. We have an anxious face, headache, restlessness, as shown by rolling from side to side, or by a tossing of the limbs, insomnia, delirium (especially at night), and we are quite certain to have paroxysms of difficult breathing, and we may have epistaxis or even hemoptysis. Usually the digestive tract is disordered, as shown by a coated tongue and a condition of constipation. Such results and symptoms arising during acute pericarditis may precede, accompany or follow the usual symptoms of acute articular rheumatism, or they are met with in children under twelve with a history of so-called "growing pains," or of any other slight manifestation of rheumatism. Again, such an acute pericarditis may come on with few symptoms pointing to the heart's covering as the seat of the disturbance. There has been vomiting, anorexia, a marked fever, and then a little pain or little tightness of the chest may be complained of, or there may be no such complaint, there being simply a marked increase in the number of respirations (30 to 60), and a pulse ranging from 100 to 160—the physical signs alone showing the pericardium to be the seat of the inflammatory action. And here it may be stated that these physical signs of pericarditis are not, for obvious reasons, as easily made out in young children as in adults. In the earliest stage, that is, the first, we should get the friction sound—the chief physical sign of acute pericarditis,—and we may get a friction fremitus during the first forty-eight hours of the disease. Once effusion has taken place we get a change in the area of cardiac dullness, but even with a large effusion there may be no change in the absolute, but only in the area of relative dullness. Usually in this disease in young children cardiac dullness extends as high as the second rib, whereas in health dullness begins only at or a little below the third.

With the signs of effusion mentioned we get oftentimes a heaving of the entire modified if not enlarged cardiac space, and often with a small effusion we may get a prominence of the precordial region. The heart-sounds are muffled by an effusion, and there is usually a change in the location of the apicial impulse or the same cannot be located. As the effusion diminishes we get a return of the sign met with in the first stage—the friction sound.

So much for the physical signs of acute pericarditis with a serofibrinous exudation in children under twelve years of age.

With regard to pain as a symptom of this disease, it must be stated that the inflammation in itself is a painless one, but that it is an inflammation frequently accompanied by pleurisy to which the pain is to be attributed, be the complicating pleurisy ever so slight in extent.

These few trite remarks have been made, not to bring this disease before you as it is to be found described in the books, but to call your attention to the fact that pericardial inflammation very frequently in young children sets in with few, if any symptoms pointing to the outer covering of the heart as the seat of the inflammatory action.

The three following cases will, perhaps, illustrate this:

The first is that of a boy aged eleven years. Three days previous to my first visit the lad, whose health up to that time had been considered the best, had a severe chill, following by vomiting. During these three days he had been feverish; out of sorts; had had no appetite, and had complained of pains here and there through his limbs, which pains the parents characterized as "growing pains." Two hours previous to my first visit he had complained of pain in the region of the stomach and had vomited. At the time of my visit he was able to lie flat, temperature 102⅖°, pulse 120, respiration 36; no cough; pain in stomach complained of, also some headache; soreness and lameness of left leg complained of but no joints of body found in the slightest degree swollen, red or tender; tongue heavily coated; bowels inactive during the preceding three days.

Physical signs: Increased area of cardiac dullness; heart sounds muffled; apex beat only imperfectly located; rubbing sensation communicated to tips of fingers applied to precordial region; heaving of entire enlarged cardiac area with every systolic, and a tremor of said area with every diastolic movement of the organ. Both parents had suffered from acute articular rheumatism. Urine of child markedly acid in reaction. As time ran on this patient suffered from insomnia, delirium at night, epistaxis, paroxysms of difficult breathing, a tendency to syncope, and a profuse sweat during each afternoon.

The second case is that of a boy eight years old. For three or four days it was noticed that the child was somewhat feverish at night, had a cough, would not eat; seemed thirsty and disinclined to be on his feet owing to lameness which he complained of when urged to move about. He then had a convulsion and I was called for the first time. Temperature 104°; pulse 140; respiration 40; urine acid; no joints swollen, red or tender. Child simply complained of tightness across his chest, but not of any pain whatsoever.

Physical signs: an enlarged area of cardiac dullness, loss of apicial impulse or beat; heart sounds indistinct; loose râles heard over both lungs, but no pulmonary signs to be found—the child having a simple bronchitis of the larger tube so far as any pulmonary lesion was concerned. Two years previous to this the lad had had an attack of acute articular rheumatism but without any heart complications. In the run of the disease this patient again gave a number of the symptoms mentioned as liable to be present and, as in the first case, as the effusion was absorbed I was able to hear the true diagnostic sign of pericarditis—the pericardial friction sound. Inasmuch as this sound depends upon roughened pericardial surfaces coming in contact, there was an absence of the sound while the effusion held these surfaces apart; but as the effusion was absorbed the surfaces at the base of the heart came together and here I found the friction sound first, although in a few days it was to be heard over the precordial space, the area of dulness then being about that to be expected in health.

The third case is that of a girl aged three years. Previous health good. I was called at the time of a severe chill to find the little one with a temperature of 104°, and a pulse of 110, and a respiration of 32; some cough but no pulmonary lesion made out. Pain complained of in right hand this morning and fingers were done up in wet cloth by the child's mother—the joints of thumb and index finger being swollen but not red or tender.

Physical signs: Friction sound heard over precordial region; also, the friction fremitus present. The child's mother had had acute articular rheumatism. The reaction of the little patient's urine was acid.

As in the other two cases, in this were many of the symptoms which may accompany acute pericarditis, such as restlessness, insomnia, rapid breathing, signs of impeded circulation, a rapid and irregular pulse, paroxysms of difficult breathing, etc. And in this child's case, within two days I found the usual signs of effusion and the friction fremitus disappeared, the friction sound grew less and less marked and the normal heart sounds became less distinct. In a few words, these three cases ran the course of acute pericarditis with effusion, giving the characteristic physical signs during the different stages, that is before, during the time of and after the effusion, and at no time did I find any of the usual joint symptoms of acute articular rheumatism save the slight trouble with the joints of the hand in the case of the little girl, and this swollen condition disappeared a day or two after the pericarditis set in.

In all three cases there was increased temperature, a rapid pulse and a quickened respiration. As time ran on the little patients suffered from dyspnœa, precordial anxiety and a tendency to syncope, inability to lie down, being forced to keep in a semi-recumbent position for days. Gradually the stage of effusion passed and gradually the physical signs disappeared and the heart sounds approached more and more the normal, until I had three patients giving no symptoms or physical signs of their severe illness; three anæmic, thin and feeble children, and yet within a few weeks they were as well as ever.

Therefore, independently of what others may state, inasmuch as the cases spoken of were severe cases of uncomplicated and non-complicating acute pericarditis with a sero-fibrinous exudation, and inasmuch as I have seen other cases and all have recovered, I would claim that the prognosis in this form of uncomplicated acute pericarditis with the effusion of fibrin and serum in children under twelve years of age is good, and that this disease—the form under consideration—is one recovered from in the strictest sense of the term.

In repetition, acute pericarditis with effusion in children under twelve is not common, but more common than in those older. The disease may precede, accompany or follow the usual symptoms of acute articular rheumatism, but in a large number of cases the rheumatic symptoms, if any, are slight, and yet in the form of the disease under consideration the urine is always acid in reaction and usually markedly and persistently so if not overcome by alkalies.

In again running rapidly over some of the symptoms the following may be given: Chill or convulsion before, with or after trivial pains in limbs, vomiting, fever, a change in the rate and character of the pulse, loss of appetite, inactivity of the bowels, a coated tongue, thirst, sometimes pain or uneasiness in the region of the heart, but usually if pain is complained of it is referred to the stomach. Insomnia, restlessness, delirium, cough, a quickened respiration, attacks of difficult breathing, a tendency to fainting, oftentimes slight or profuse hemorrhage from the nose, or slight hæmoptysis, and when the circulation becomes sufficiently embarrassed from the mechanical effect of the effusion on the force of the heart's action, we have passive congestion of some or many organs, and superadded the symptoms and signs of said congestion. As for the symptoms we have just run over, some are met with early in the disease and others after effusion has taken place. But be the symptoms as they may, they are never sufficient in themselves for a diagnosis. We must depend upon the physical signs—and these have already been fully spoken of—it alone being important for us to remember that the pericardial friction sound is heard with the first or second sound of the heart, or with both, but that it is not always synchronous with these sounds, and that this friction sound is often in children very faint and very easily overlooked.

These symptoms and signs are at best variable, the latter depending upon the stage of the disease, but marked acidity of the urine is constant and one factor pointing to the possibility of the existence of pericarditis. It has been claimed by some that attacks of syncope during the course of acute pericarditis are due to a complicating myo-carditis, but in young children I am forced to believe such attacks to be due solely to a large effusion. When we come to the diagnosis of the disease under consideration we, as has been stated, have to depend upon the physical signs, for however much the rational symptoms may point to acute pericarditis these symptoms may be dependent on a cause or causes giving no lesion of the outer covering of the heart.

But in acute pericarditis we have the friction sound, and oftentimes the friction fremitus, and the friction sound is generally first heard over the base of the heart. To aid in demonstrating that the friction sound is due to inflammation within the pericardium, and not due to pleurisy, we listen during a voluntary cessation of respiration.

To continue this repetition: It is to be remembered that effusion gives us an increased or modified area of dullness, and gradually a loss of the friction sound and muffling of the normal heart sounds, and absorption is accompanied by a gradual return of the friction sound and heart sounds becoming more and more distinct. Twice has it been stated that effusion gives us either an increased or a modified area of cardiac dullness, and this statement may bear explanation. In health the boundaries of the area of cardiac dullness may be compared to the lines of a triangle, one angle corresponding to the location of the heart's apex, and one side to the base of the organ. Now if the effusion is a large one these boundaries are all spread out, and the angle which corresponded to the location of the heart's apex loses its existence, and we have boundaries to this increased area of dullness which must be compared to a far larger triangle, giving us one side which corresponds to a line drawn below the heart's apex, and one angle which corresponds to the juncture of the pericardium with the great blood vessel, the aorta. Again a small effusion only modifies the area of cardiac dullness, for the fluid, following the law of gravitation and distending the lower portion of the pericardial sac, occupies a certain amount of lung space to compensate for which the upper part of the left lung does extra work, and in so doing extends over the upper portion of the heart, giving us no increase in the area of absolute dullness, but only a modification of said area. In a few words, the normal area of cardiac dullness appears upside down.

Now we will turn for a moment to the matter of a differential diagnosis between pericarditis and pleurisy.

In the former the pericardial friction sound is, as a rule, confined to the region of the heart, whereas in the latter (the pleuritic) friction sound is, as a rule, not, but is usually most perceptible posteriorly—the pericardial friction sound being rarely, if ever, heard over the posterior surface of the chest, although in children it is sometimes heard over the entire anterior surface. Moreover, suspended respiration ends for the time being the pleuritic, while it has absolutely no modifying effect upon the pericardial friction sound. And again, fluid in the sac of the pleura does not muffle the normal heart sounds as fluid in that of the pericardium does. The diagnosis between pericarditis and endocarditis depends upon the fact that in pericarditis we have the friction sound and afterwards the sign of effusion, and in endocarditis a blowing, not a friction sound, and slight if any change in the area of cardiac dullness, while, moreover, we have as an aid the well-known fact that these blowing sounds are often best heard without the pericardial region, along the carotids, or even over the posterior surface of the chest.

In conclusion, concerning the diagnosis of acute pericarditis with effusion in young children it must not be forgotten that this disease, so far as symptoms go, may simulate acute gastritis, or acute inflammation of the coverings of the brain, or many of the other diseases met with in children.

It is good advice to give the following: In all cases of persistent vomiting, hiccoughing, or of acute disturbance of the cerebrum in children, be sure to examine the heart with reference to acute pericarditis. Were it not for auscultation and percussion we might, for a time at least, look upon cases of acute pericarditis with effusion in children as being cases of acute indigestion, malarial fever, cerebral inflammation, or acute central lobar pneumonia, and these four diagnoses have been held out to explain four cases of acute pericarditis with effusion, which cases, to the writer's knowledge, gave solely the physical signs of acute pericarditis.

The duration of this form of the disease in children is from two weeks to two months. That is, it takes this length of time for the physical signs to disappear, although most if not all of the rational symptoms markedly remit or give way within ten days or two weeks. As stated, the prognosis is good. The cases usually recover.

With regard to the treatment of the form of acute pericarditis under consideration, salicylic acid, the salicylates and salicin, are worse than useless. They are only too often injurious. I believe the best treatment for children to be absolute rest, proper and properly administered nourishment, alkalies properly administered, alcohol, digitalis and stimulating doses of opium; opium, not morphia.

Blisters, I believe, do little good, and when used they should not be placed immediately over the region of the heart. The pericardium being a closed sac, purging can do little good. For my part, I never now resort to blisters or purging. With regard to proper nourishment, properly administered, milk, eggs, broth and soups should be given at regular intervals of two or three hours, and here allow me to state that household beef tea should not be used. Beef tea, as made by steeping beef in water is useless, or nearly so. Such an extract contains little or nothing in the way of nutriment. At best, it is a stimulant, and one vastly inferior to coffee. Beef tea, made as stated, strained or not, is a nightmare to me. May I ask what is the stimulating principle of such a beef tea? Is it not creatinine, which, when taken, irritates the kidneys? Now, why give this to a child suffering from a disease in which we usually have more or less passive congestion of the kidneys? Is it not possible that all this waste of the dead ox, which, had life continued, would have called upon the kidneys to eliminate, may, when superadded to the waste within the tissues of a child, suffering from disease, call for altogether too much work on the part of the kidneys perhaps already embarrassed by congestion, slight or intense? If it does not do this, it is liable to irritate the bowels, disturb the digestion and cause diarrhœa.

The following experiment of Charcot (if I mistake not) is a good one to cite. He took nine dogs and separated them into three lots. He then took a quantity of the best of beef and divided it into equal parts, and of one of these portions he made beef tea by the ordinary mode of steeping. To three of the dogs he fed the division of raw beef and these animals grew fat. To three other dogs he fed the beef left after the tea was made and these animals lived. To the three remaining animals he fed the tea and these unfortunate ones wasted rapidly and quickly died. But please to pardon this digression and my hatred of household beef tea as being all that is bad in beef with the slightest amount that is good.

With regard to the use of alkalies, I believe they should be given an hour and a half or two hours after food, for we seek absorption into the blood of our alkali, as such, and not a mere neutralization of the acid contents of the stomach. In a few words, let us give our alkalies when the stomach is emptying its contents into the intestines where the normal reaction is alkaline.

As to a choice of alkalies but little is to be said. In treating young children I prefer the sodium salts as having a less injurious effect than the potash base on the blood and the heart. In young children the salt I prefer is the bi-carbonate of soda. The alkali should be pushed until the urine is not only neutralized but rendered alkaline. When this is accomplished, the smallest amount necessary to keep the reaction alkaline should be used. If the pulse becomes irregular and intermittent, and at the same time remains rapid, we must push alcohol and digitalis; but if, during the use of digitalis, the pulse becomes irregular and intermittent, and at the same time grows slower, we must discontinue digitalis and rely upon alcohol. In the latter case, a slow pulse or one irregular or intermittent or both, the trouble is not, I believe, due to the disease, but to the remedy.

To sum up: We use alkalies from the beginning, and we attend to absolute rest and proper food and nursing. We use *hot anodyne* poultices when pain is complained of. We use alcohol, digitalis and quieting and stimulating, not narcotic, doses of opium (the tincture preferable), during the time these remedies are indicated. In fact we aim to contend with, not to cure, the disease, for the inflammation will run its course and beyond the use of alkalies to neutralize the cause, we have merely to hold up our little patients and meet indications as they arise, ever watching carefully for complications such as pneumonia, pleurisy, etc. Once active inflammation has subsided, as indicated by the subsidence of fever, the pulse running rapid for weeks oftentimes, we use tonics such as iron, quinine, etc. As stated, blistering and purging in this disease have been discarded by me. As to aspiration of or as to tapping of the pericardial sac I can state little or nothing inasmuch as I have never met with an effusion in children so marked as to demand relief from either procedure so rarely carried out even in our dealing with this disease in adults. Knowing that it may be claimed that acute pericarditis in children is quite rarely met with, I would state that this is, in a measure, true, but that it may better be claimed that acute pericarditis, especially the forms under discussion, like rheumatism in young children, is very frequently overlooked—the cause of suffering being considered as any other than pericardial inflammation.

POISONING BY POTASSIUM CHLORATE.—Dr. S. B. Jones, of Charlotte, N. C., reports an interesting case of a little girl, nine years of age, who had been under his care for a slight fever. On the day following that on which she was dismissed as cured, the child had a sore mouth, and her mother gave her a paper containing something over an ounce of potassium chlorate, allowing her to take it *ad libitum.* Liking the taste, the girl ate the crystals all day, consuming between 200 and 300 grains. At about two o'clock the following morning the patient awoke vomiting, and some five hours later was deathly pale, with blue lips and a very rapid and feeble pulse. The patient remained in this condition the three following days, retaining no food and passing no urine. An analysis of eight ounces of urine drawn the second day showed six grains of potassium chlorate. Life was sustained for some time by enemata of beef peptonoids, until the rectum became too irritable to retain the injections. The patient sank rapidly and died just one month after taking the drug. No autopsy could be obtained.

A few other cases of poisoning by potassium chlorate have been reported; but in each instance, we believe, large quantities of the drug have been consumed. The free use of potassium chlorate candies by children for sore throat presents a question worthy of attention.—*Chemical Gazette.*

ON NATIONAL PHARMACOPŒIAS.

ABSTRACT OF A LECTURE BY OSCAR OLDBERG, PH. D.
Prof. of Metrology, Buffalo College of Pharmacy.

[CONCLUDED.]

[Stenographically Reported for THE MEDICAL PRESS, by A. L. Benedict.]

To fix the identity of substances, the pharmacopœia observes certain rigid rules. Some of these I have already repeated to the class of this college, but it seems to me so important a thing that here, now, we might as well partly review that portion and compare the several pharmacopœias of the world for the purpose of seeing just about where the U. S. P. stands on that question.

All the several civilized countries have their national pharmacopœias. They are government publications as a rule. In our country the government is not so paternal. We may say, perhaps it would be a good thing if it were, so far as the pharmacopœia is concerned perhaps not. In our country the pharmacopœia is not prepared by the government or by government authority, but it is prepared by delegates sent by incorporated colleges of medicine and pharmacy, and by the incorporated societies of physicians and pharmacists of the country. Each such society and college is entitled to three delegates to go to the pharmacopœial convention, which meets once in ten years in Washington. The last one met in 1880. Then that convention appoints a committee to do the work of revision, and instructs that committee how to conduct their revision, or, at least, what general principles to apply to the work.

The convention of 1880 gave some excellent rules to the committee. It provided for a thorough system, in accordance with which the pharmacopœia is hereafter to be framed. Look in the first editions of even the German pharmacopœia, and you will find no such rigid system as this. Now, what is the system?

In order to establish perfect uniformity and remove all ambiguity, the book first gives of every substance in the pharmacopœia the Latin name, which, as nearly as possible, serves as a definition. Then it gives us another systematic title in English for daily use—we are not supposed to use the Latin title for that purpose. Then, after giving these titles, the pharmacopœia next goes on to give a very elaborate and very distinct definition of what the title means. It begins with the most obvious external characteristics, and goes on to state the odor, taste and all other characteristics by which the drug might be identified.

Now, when we come to chemicals the same thing is done again, only in that case the definition is in the form of a chemical formula. The formula is given both according to the old system and the new. Then is given a description, chemical first, for that is the most obvious of external properties; then a separate paragraph which gives the chemical tests which might be applied to verify the identity of the drug, Next a paragraph which gives purity tests; next one which gives quantitative tests, if such a test is necessary.

In the German pharmacopœia, which has been looked up to as the best, a similar system has been observed, although the German pharmacopœia does not go quite as far as ours. It gives the same distinct titles, and with more rigid rules applied to the nomenclature than ours, perhaps, and the nomenclature is more explicit than ours. Whenever the drug is vegetable the particular part is given. Stigma croci sativi is what constitutes saffron; instead of allium they would say bulbus allii, since it is the bulb and not the botanical allium that constitutes the drug. But when it comes to the definition the German pharmacopœa employs the name of the plant from which the drug is derived.

Now, how about the British pharmacopœia? It follows precisely the same rule as ours in some cases, and the rule of the German pharmacopœia in other cases. In some cases it is almost impossible to account for the inconsistencies of the nomenclature; why they should be so particular to mention the plant part used in some cases, and why they should be so negligent in other cases as not to mention it at all. Our pharmacopœia does not mention the part used unless other parts of the self-same plant happen to be used at the same time.

The French pharmacopœia, as the title page says, was published in 1884. In its materia medica list we find no Latin titles, no systematic titles in any language. We find the vulgar names in French, and that is all. The Latin origin is given, to be sure, but no definition, no Latin title, and the statement as to what plant part is used, is often obscure. Just how many simple drugs there are in the French pharmacopœia it is impossible to tell from the book itself.

When you come to the pharmaceutical portion of the work, look at this wonderful electuary, which I mentioned a little while ago, which has fifty-eight compounds; in this one preparation you can find twelve drugs not given in the materia medica list. You will find one with the statement that it is used only in veterinary medicine, although it is not so used in this preparation. Turpentine you will find in the index with the page given where it ought to be found, but it is not there. It reminds me of Dr. Thomas F. Wood of North Carolina, who came to the convention in 1880, the only representative of the southern states. He ought to have been in France when this was made. He came from North Carolina, where they have a great deal of tar and pitch, and so on. When he was admitted as a member of the committee, he said: "Gentlemen, this is too great an honor; all my business is to see that turpentine is not left out of the pharmacopœia."

Now, as to nomenclature, there are several distinct systems of chemical nomenclature. Our pharmacopœia is probably as near modern chemistry, in respect to nomenclature, as any in the world. I believe the German is in this respect behind. But when we come to the French, it has, oh, ever so many systems, or none at all,—I do not know which way to express it best. The French people were the first to propose the metric system—and a grand system it is, and its universal adoption is a foregone conclusion, I suppose; the French are very proud of it. Those self-same people who proposed it and adopted it, and wanted the rest of the world to come to terms and take it from their hands, what did they do in the way of chemical nomenclature? We have symbols representing elements which are now uniform throughout the world, except in French in two cases only. The symbol N is used for nitrogen in every other place, but the French put it Az., because they will call it azote. P. for phosphorus they call Ph. When it comes to nomenclature, we find the modern theory of alkaloids recognized in a very methodic way in one or two cases, as if they wanted to convince us that they were wide awake to new theories of chemistry, and wanted to make their nomenclature conform to the theory. You know that salts of alkaloids and salts of ammonium are formed in such a way that the hydrogen of the acid enters into the salt, not as the salts of metals are formed, where the metal displaces the hydrogen of the acid. Now, they wanted the nomenclature to agree with this theory, and they put it *chloro-hydras ammonii*, but two or three pages afterward they have the iodide of ammonium, but there it is *iodo-hydras ammoniæ.* We have adopted the ending *ia* for alkaloids as well as for ammonia. They do so, but they adopt the same ending for all sorts of things also. They say azotas aconitæ and then they speak of sulphas strychnicus and morphicus. In other instances they have a third ending for salts of alkaloids.

Nobody would know that the French pharmacopœia was revised in 1884 except from the title-page. When we come to the nomenclature of other things in the French pharmacopœia, we would suppose that the Latin names that the French pharmacopœia gives for chemicals and that it fails to give for crude drugs, are really Latin, or Latin in form. I have already told the class that these so-called Latin titles are not Latin, they are simply Latinic in terminology, but the words themselves are from all sorts of roots, Hindoo, Arabic, Greek and South American, and from savage tribes. Such words are catechu, coca, etc., but they are given in Latin forms and treated as if they were Latin, and these Latin terms in the French pharmacopœia are supposed to follow the same rules as other titles. They have one drug which is called *coal-tar*, we recognize that as a very familiar word to *us.* Now, after giving the French title coal-tar, they go on to give the Latin term *coal-tar*, and then they give the emulsion in Latin, *emulsio de coal-tar.* There is another preparation with a very Latin title also—*potio de Todd.*

There are 750 preparations in the French pharmacopœia, 400 in ours and the British, and about as many in the German, so that, you see, the French are ahead of us in that respect.

We were so extremely careful in the framing of the pharmacopœia of the United States — we were most afraid of the doctors in that respect—that we didn't put in anything whatsoever that would give the suggestion of meddling with therapeutics, not once, except in the title of one time-honored preparation alone, and that is *pilula cathartica composita*, and the English title of *compound* *cathartic pills.* I don't like that title. It ought to have been *pilula colchici composita.* In the British pharmacopœia, we find about half a dozen preparations whose titles refer to therapeutic use. In the German, a little less than half a dozen; in the French, nearly 100.

As to the style of the preparations, it is noticeable that in the United States pharmacopœia you can find a dozen, or possibly two dozen mixtures that contain several things having distinct thereapeutic action, but you will find very few worse than the one I have mentioned (*i. e.*, the electuary of fifty-eight compounds). Dewey's mixture and two or three others crept into the last edition. In the British pharmacopœia, we find quite a number of compound pills; in the German, perhaps half a dozen, and the French is full of them.

There was a Dr. Paush in London a good many years ago who wrote an exceedingly interesting volume called Paush's Pharmacology, and this was the English pharmacopœia. It was severely criticized because it gave just such preparations as I have given you. Bell, in writing his history of pharmacopœias, stated that it was used as an argument against the compilers of the British pharmacopœia of 1820, that it contained twenty ointments. What would they say if they knew that to-day the British pharmacopœia contains forty-three ointments? We have twenty at present.

Fluid extracts are used only in our country, but after going through the entire list of ordinary preparations, extracts, fluid extracts, tinctures and ointments, and so on, with which we are familiar, the French pharmacopœia adds to the list five lemonades, one beer, eleven potions, twenty-one drinks, and, I think, eleven baths.

Now, of course, after all this criticism, it is well to remember that all pharmacopœias are liable to err, and that ours, too, is full of errors. There are a great many errors of detail in the U. S. P. But there is difficulty about the correction of errors, that some gentlemen who find the errors do not find them in the right spirit. They find them simply for the purpose of finding fault and criticising. When the U. S. pharmacopœia was first published, one gentleman, for instance, a very distinguished pharmacist, was very severe on the committee of revision because, he said, " They have increased the strength of opium preparations forty per cent." The gentleman was totally mistaken. The opium preparations have not been increased forty per cent. at all. He based his opinion on the fact that the minimum preparation was ten per cent. of morphine, and the fact is, that under the laws of the United States, no opium ever enters this country which contains less than eleven per cent. of morphine. Now, then, all the committee of revision had done was to raise the minimum limit from ten per cent. to twelve per cent., and it put another limit at the other end, saying that it must not contain any more than sixteen per cent., but Dr. Squibb insisted that the percentage had been increased from twelve to the average between twelve and sixteen. This was not true, because the same opium used then is in use now.

AXIS TRACTION FORCEPS.*

BY CONRAD DIEHL, M. D.
Buffalo, N. Y.

As my remarks must be brief, I will confine myself to a consideration of the *Tarnier* forceps, upon which many have attempted to improve, and the *Neale* (Baltimore), the latter having all the merits and good qualities of the former, with the simple difference that the traction rods can be easily detached for cleaning, or, if you wish it, at the time when the head has descended into the pelvis, in which case one can deliver as with the ordinary forceps. At the same time I wish to disapprove of supposed improvements on the Tarnier, where the attachments are made to the lock; forms which, I believe, have no advantage, as they will be inclined to slip, while one can only pull in the line of the handles and not of the blades or axis of the pelvis.

To illustrate the advantage of axis traction I will mention a few cases.

Case 1.—Was called on the 24th day of February, 1884, to see Mrs. H. in her second confinement; found the os well dilated, but the head high up and resting on the pubis, it being pressed forward by a marked projection of the promitory of the sacrum. She informed me that she had had the same difficulty with her first confinement, and that my friend Dr. S. had labored hard and long with the ordinary forceps before he could deliver her. Prof. Mann having informed me but a short time previous that he had a Tarnier forceps, I considered this a proper case to try the same. I sent for Prof. Mann, who, on examination, confirmed my views and applied his forceps. To our great surprise, in making traction with only two fingers, he succeeded in bringing the head down into the pelvis, and then followed an easy delivery of a living child. Convalescence was normal.

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*Being a portion of the President's address to the Alumni Association of the Buffalo Medical College, March 1, 1887.

Case 2.—Mrs. H—l, age 20, American. This patient first came to my notice February 15, 1884, when I was sent for by a midwife, who had been with the patient for twenty-four hours, during which time the patient had been been having, as she stated, severe pains. I found a dwarfed female with pelvis flattened from both sides, she having been the subject of a double hip-joint disease during childhood. I found, also, both hip joints almost completely anchylosed, there being hardly room to introduce two fingers. The os was sufficiently dilated. Seeing that there was no chance to deliver her, I sent for Dr. Mann to bring craniotomy instruments; these he used with great difficulty. After emptying the cranial cavity, Dr. Mann was able to bring away the child. She made a good recovery. On account of the necessary forcible separation of her limbs, probably some old adhesions were torn, and she had better use of the same than before. During the following summer she again became pregnant, and on the 8th of February, 1885, she being then in the eighth month of her pregnancy, I brought on premature labor. When the os was sufficiently dilated I sent for Dr. Mann, and we applied the Tarnier forceps and with considerable difficulty delivered her of a child, which lived but a short time. Convalescence normal.

Case 3.—Was called in consultation with Dr. M. on the 22d of February, 1885, to see Mrs. G., primepara; age twenty-two. The doctor informed me that she had been in labor for several days. The long Siebold forceps were still applied, and the doctor had the patient under chloroform. On examination I found the head high up in the superior straight, with a caput of considerable size presenting. I made as much effort as possible with the forceps that were applied, but without effect. I then removed them and applied the Tarnier, and was able to deliver. The child was dead. Its death, I think, was due to long continued labor pains.

Case 4.—Mrs. K., age thirty-eight, German. Delay from some unknown cause. After waiting a proper time after the os had sufficiently dilated, and finding that the head would not descend from the superior straight, I applied the Neale forceps and very easily delivered. This case is similar to several others in which I applied the Neale with equal success.

WOUNDS, AS RELATED TO THE INSTRUMENTS WHICH PRODUCE THEM.—Dr. Macewen (*Glasgow Medical Journal*) gives us a careful study of seventy-one cases, including one hundred and four wounds, produced by fifty-one different articles. He concludes:

1. But instruments sometimes produce scalp wounds having straight outlines and sharp, clean edges, which, in these respects, could not be distinguished from wounds produced by sharp cutting instruments.
2. Scalp wounds, which exhibit entire hair bulbs projecting from the surface of their sections, have been produced by blunt instruments.
3. Wounds exhibiting nerve filaments, or minute blood-vessels bridging the interspace between the lips of the wound toward the middle of the depth of the section, while the tissues have receded all around them, below as well as above, have been produced by blunt, non-penetrating instruments.
4. When a wound, even with sharp, well-defined margins, bears in contour a resemblance to an osseous ridge in close proximity, there is a *probability* that it was produced by a blunt instrument, through forcible impact against the underlying osseous ridge.
5. *Cut* hairs found in the immediate vicinity of a wound are valuable aids in determining whether a sharp or blunt instrument has been made use of.
6. As to the diagnosis between wounds produced by instruments of the knife kind and other sharp-edged substances, such as glass, earthenware, etc., no dependence can be placed on the mere regularity of outline or sharpness of edge, or the reverse.
7. Sharp, clearly defined wounds, in certain cases, present peculiarities in their termination, which may be sufficient to enable a probable diagnosis as to whether they were produced by a knife or portion of glass or earthenware.
8. The same instrument used by the same person in delivering several successive blows may produce wounds of different characters.

The Medical Press

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BUFFALO, N. Y., APRIL, 1887.

THE CITY MEDICAL ASSOCIATION.

Why it is that a society which has numbered among its members so many excellent men, to say nothing of the material which it contains to-day, should be allowed to crumble away, and its members to become listless and apathetic, is more than one can readily ascertain. Whatever be the cause, the attendance at its last three meetings has been disgracefully small. In trying to account for this state of affairs we realize that it has to compete with three or four private medical clubs, most of whose members are live, energetic young men, who have gone into them and attend them regularly partly because anybody could get into the city society, and partly because when there they often had to listen to a lot of unscientific twaddle that was neither interesting nor instructive. Moreover, the social element in the clubs is a strong factor in their prosperous existence.

Again, a disgruntled few, defeated in a discreditable effort to make the dishonest appear honest, have not only stayed away themselves, but have done all they could to ruin the society. In no essential respect, however, has this attempt succeeded, and the conspirators are not missed.

As yet the society has found no suitable home. A hotel parlor is in no wise preferable to a noisy and cramped hall; but now that the Buffalo Library building is completed, some provision should be made for meeting within its walls.

The habit of calling upon each member to say something in discussion should be discontinued. It brings to their feet men who would otherwise remain silent; it leads too often to a flux of words when there is a stasis of ideas. In our profession, as in other walks of life, too many men talk when they have nothing to say; like Juliet, they "speak, yet say nothing." What the society needs is fewer words and more wisdom.

Now, how is all this to be remedied?

First let it elect live, non-partisan men for officers. The present officers have filled their respective positions most acceptably, though, to be sure, twice of late "no paper" was announced, while the evenings had to be filled by voluntary communications and were consequently not quite wasted. Let suitable quarters be secured in the Buffalo Library building. Let an essayist *at once* be secured for each meeting during the ensuing year; let some man who has paid or will pay particular attention to the subject of each essay be invited to open the discussion; let only those who are worth hearing partake in the same, and let the chairman at once choke off all irrelevant or ambiguous talking against time. Let the hall be large enough so that a general invitation to each meeting may be extended not only to the profession, but to the medical students of the city.

There surely are a dozen men in the city, worthy a hearing, who will each consent to be responsible for an evening's entertainment, and who would "draw" good audiences. We sometimes feel that the doctors of Buffalo don't want to hear good papers. At the last meeting of the society the members present could be told off on one's fingers, and yet the paper read was an excellent one, and will appear later in our pages. At the meeting of the Alumni Association of the Buffalo Medical College held March 1, to which everyone was made welcome, the best collection of thoughtful essays was read that has been heard in Buffalo since the American Medical Association met in 1878, and yet the better part of the audience came from without the city. Shall we soon arrive at a point where it will be necessary to arrest men and compel them to listen to that which they ought to be anxious to hear?

The annual meeting of the City Association occurs April 5. Let every member who has its interests at heart attend it, help to elect the best man president, pay his dues, and resolve to do his duty by it during the ensuing twelve-month. Let us all join hands to resuscitate it and make it such an organization as its traditions and the records of its past entitle it to be; such as our best interests indicate it should be, and such as our common and hearty efforts can readily cause it to be.

THE FORTY-FIRST ANNUAL COMMENCEMENT, MEDICAL DEPARTMENT, UNIVERSITY OF BUFFALO.

Commencement Day began auspiciously with a well-attended alumni meeting, the brief address of welcome being delivered by Prof. Pohlman. After the customary felicitations and remarks of welcome he concluded by saying:

> "We look back upon the past year as a year of prosperity and well-deserved honor, and while we as alumni rejoice in the success of our alma mater we must not close our eyes to the fact that the usefulness of our institution of learning is limited by the available space and the available funds, and that the University of Buffalo will in a small number of years demand more room for her present two departments, not to mention others to be inaugurated in the near future. How much the alumni can aid their alma mater in this direction I am unable to say, but I am certain that energy and influence can accomplish a great deal. I understand that the by-laws of the Alumni Association are to undergo an important revision to-day —may the change made be such as will bring about a closer union between the alumni and the university as well as among the members themselves; may your deliberations be attended by success and governed by the sweet spirit of tolerance. And if we part again to-morrow, and you go back to your homes in different parts of our great country, may this spirit of tolerance go with you; and if you meet a brother (?) physician who, for the sake of gaining a little cheap notoriety casts slurs at you or your alma mater, be tolerant with his benighted mind, and take the position of the lion in the fable who said 'a lion can afford to ignore the brayings of an ass!'"

After the roll call and the transaction of some routine business the matter of a fund for a prize essay was brought up, a nucleus of $100 having been already raised, and Drs. Pryor, De Lancey Rochester and William H. Thornton were appointed a committee to solicit further subscriptions.

Dr. Vandenbergh was delegated to go before the Council of the university with a request that the alumni be empowered to select a representative from their own body as a member elect of the Council.

Dr. E. M. Brush, of Philadelphia, was appointed a special committee to prepare a suitable memoir concerning the late Prof. Julius F. Miner. Discussion concerning the manner of providing for the reception of graduates from the College of Pharmacy as alumni of the University was begun, but was finally deferred till the next annual meeting.

The nominating committee having reported the following ticket, it was unanimously adopted:

President—Henry Lapp, Clarence.
Vice-President—D. W. Harrington, Buffalo.
Second Vice-President—C. S. Pugsley, Oakfield.
Third Vice-President—C. A. Ring, Buffalo.
Fourth Vice-President—A. G. Ellenwood, Attica.
Fifth Vice-President—Miss Bina Potter, Buffalo.
Permanent Secretary—J. J. Walsh, Buffalo.
Recording Secretary—W. H. Thornton, Buffalo.
Treasurer—E. C. W. O'Brien, Buffalo.

Trustees—Henry Lapp, Clarence; P. W. Van Peyma, Buffalo; E. C. W. O'Brien, Buffalo; C. Diehl, Buffalo; H. Hoyt, East Aurora.

Executive Committee—F. P. Vandenbergh, J. H. Pryor, H. H. Bingham, Buffalo; *ex-officio*, Prof. Charles Cary, C. H. Lapp.

AFTERNOON SESSION.

The President, Dr. Conrad Diehl, took as the subject of his address the comparative merits of the Tarnier and other obstetrical forceps; an abstract of the same being given on another page in this issue.

Prof. M. D. Mann read an elaborate paper on the "Removal of Solid Tumors by Abdominal Section," in which he reported eight successful recent cases, and exhibited the specimens from each. His paper was a most valuable contribution to the literature of the subject, and will hereafter be published in full.

Dr. Ernest Wende next read a paper on "Skin Diseases of Germ Origin and the Use of the Microscope in their Diagnosis." It was a scholarly essay concerning matters of no small interest to the general practitioner; and was followed by the presentation of several members of one family all of whom were affected with favus, illustrating the contagious character of a skin disease caused by a vegetable parasite.

Dr. J. H. Pryor presented a careful and elaborate study of "Prognosis in Valvular Lesions of the Heart." In it he took the ground that the proportion of these cases which were the real cause of sudden death was much overestimated, and that the causes of sudden death, in the course of heart disease, should be looked for rather in the heart itself or in its nerve supply than in its valves.

Prof. Roswell Park closed the afternoon exercises by a discussion of "Intubation *versus* Tracheotomy," in which he stated briefly but succintly the advantages and disadvantages of each, and, after expressing himself as greatly in favor of intubation, in the vast majority of cases, concluded with a brief account of some of his recent cases with a percentage of at least one success in every four efforts, and much higher than that in reasonably hopeful cases.

MEETING OF THE COUNCIL.

Aside from approving of the recommendation of the faculty concerning the graduating class, and ratifying the election of Drs. B. H. Putnam, of North East, Pa., W. E. Lauderdale, Jr., of Geneseo, and S. C. Pugsley, of Oakfield, as curators, the council voted to confer the degree of B. S. upon Prof. F. P. Vandenbergh, and of Ph. G. upon Prof. W. G. Gregory. They also elected Messrs. C. H. Haskin, of Rochester, and J. P. Diehl, of Buffalo, to be curators of the College of Pharmacy. Prof. R. A. Witthaus was also made Professor of Pharmaceutical Chemistry and Toxicology in the College of Pharmacy. Hon. J. O. Putnam read the report of a special committee on the establishment of a law school as a department of the university. The gist of his report was that at present there was neither the need felt for such a school nor was there such prospect of immediate success as to justify the establishment of any such school in Buffalo so long as Cornell proposed, with the aid of its magnificent endowment, to found one so near to our city. Further than this, that no man whom the legal profession of the city would support for the position of dean of such a school could be induced to make the necessary sacrifice of time.

COMMENCEMENT EXERCISES.

These were held at Liedertafel Hall at 8 P. M., the audience very greatly overcrowding the hall.

After the opening prayer by Rev. S. R. Fuller, the Hippocratic Oath was administered, and then the degree of M. D. was conferred upon the following: William W. Ruby, Rochester; Elizabeth Johnson, Montreal; Brayton N. Strong, Colden; W. C. L. Meisburger, Buffalo; James C. Earle, Belfast; Earl A. Scofield, Gerry; Harvey E. Brown, Fayette; Charles D. Johnson, Hartstown; Edward Meany, Jacksonville; William H. Bergtold, Buffalo; Frederick H. Stanbro, Springville; William H. Olmstead, Elmira; Bernard Cohen, Buffalo; George M. Harrison, Dunkirk; William H. Chace, Mayville; Clark Francis Bruso, Buffalo; Thomas E. Soules, Cherry Creek; Fridolin

Thoma, Buffalo; Arthur W. Hubbard, Punxsutawney; Stella Cox Venable, Geneseo; Alexander McNamara, Corning; La Rue R. Colegrove, Elmira; Jacob W. E. K. Davis, Easton; Franklin A. Trippet, Williamsville; David H. Webster, New Burg; Clarence V. Gray, Hulberton; Clifton G. Smith, Carlton; Frank W. Huff, Penn Yan; Burg Chadwick, Smethport; Charles W. Davis, Randolph; Andrew J. Martin, Clarence Center; William H. Mansperger, Buffalo; George W. Roos, Buffalo; Marshall C. Butler, Little Valley; Mark Alward, Petticodine; Edward H. Wells, Geneva; Jasper D. Wooster, Buffalo; George Stephen Skiff, Pike; Joseph W. McGill, Pittsford; Alfred Day, Rochester; Jeremiah L. Sullivan, Batavia; Adolph A. Auger, Roxton Pond; George A. Sisson, Buffalo; Philo L. Alden, Putteney; Guy B. Crandall, Randolph; Peter Guinan, Mendon; Grosvenor R. Trowbridge, Buffalo; William R. Palmer, Port Allegany; Eugene A. Smith, Buffalo; William W. Skinner, Prattsburgh.

The honor roll was announced to be made up of Eugene A. Smith, George M. Harrison, William H. Chace, William W. Skinner, La Rue R. Colegrove, William W. Ruby, Edward Meany, James C. Earle, Clark F. Bruso, Mrs. Stella Cox Venable.

The following theses received honorable mention: "The Third Stage of Anæsthesia," by Eugene A. Smith; "Estimation of Urea in Diagnosis of Cancer," by Jasper D. Wooster; "Comparative Test of Pepsin Preparations," by Elizabeth Johnson.

The address to the Graduating Class was delivered by Prof. J. M. Cassety, Principal of the State Normal School. It was an elaborate, thoughtful and well considered appeal to those before him who were entering upon their life's career, to make themselves worthy of their calling and honorable members of their profession.

The address to the Alumni was given by Dr. P. M. Wise, Superintendent of the State Insane Asylum at Willard. He took for his subject "The Remedial Influence of the Mind," treating of it largely from the psychiatrist's point of view. He showed, by means of striking illustrations, the close relation and inter-dependence of mind and matter. While not adhering to all that is put forth by Christian scientists, mesmerists, mind curers and believers in the "royal touch," Dr. Wise adduced instances of cures effected by simply working upon the human imagination and expressed his belief that these adjuncts of the medical profession were not so fully taken advantage of as they might be. They were not justified in practicing deception or asserting untruths in order to gain any desired condition of mind, whether for remedial purposes or otherwise, but it was not essential that patients should be fully informed of the *rationale* of the treatment which they might be undergoing, and it was seldom that they were so informed. In view of what could be accomplished by exercise of will power, he submitted that the physician who did not consider *all* the means that might favorably affect the health of a patient, was not using his opportunity to the advantage of his patient or himself.

Both addresses were listened to with careful attention by the large audience, and elicited most hearty commendation.

THE BANQUET.

The Annual Supper was held at The Richmond, and was largely attended, many alumni from out of town being present. Dr. Conrad Diehl, the retiring president of the Alumni Association, presided.

The following toasts were responded to, and the company did not leave the dining hall till three o'clock.

The University—Hon. E. C. Sprague.
The Judiciary—Hon. Albert Haight.
The Clergy—Rev. Dr. E. G. Taylor.
Our City—Hon. Philip Becker.
Journalism—Edwin Fleming, Esq.
The Alumni Association—Dr. Henry Lapp.
The Ladies—N. S. Rosenau, Esq.
The Graduating Class—Dr. W. W. Ruby.

* * *

Some weeks ago the profession were invited to meet and formulate the plan of organization of the Board of Health which best pleased them, in order that the Charter Revision Committee might incorporate the same into the new charter now in preparation. This they did after several conferences with the present board. Their recommendation was sent to the committee and by them utterly ignored; some of the demagogues in that body concluding that they best knew what was for the city's good. According to their peculiar views this astute committee drew up the new title in such a way that one man was to constitute the Board of Health, and was to receive $5,000 a year for his services.

Liking this new proposition, with its accompanying affront, still less, the city medical societies have recently held special meetings, at which regulars and irregulars alike entered their common protest against one-man-power in matters of public health. Whether this will be of avail remains to be seen; nevertheless the profession certainly have sufficient influence to block the passage of any such measure through the legislature, and they seem quite ready to utilize it if necessary.

* * *

THE many friends of Dr. Herman Mynter will be delighted to learn that he has returned from his foreign trip and has resumed his practice at 195 Franklin street. The doctor's letters from abroad have been replete with items of interest, and during his travels he has seen and learned much that will be of value in his work. He began work at the hospital March 1st, and during the spring term of the college will give the usual surgical clinic.

* * *

DR. W. P. SHOEMAKER, of Bradford, sends a report of a case of "very slow pulse. Mr. G—, aged fifty-two, was suffering from an attack of pericarditis with effusion, and had at the same time catarrhal jaundice. During the third and fourth days of the diseases his pulse beat was twenty-seven per minute. It then gradually came up to normal. There were no brain symptoms. His pulse for some years has been between fifty and sixty per minute, and he has a well marked areus senilis, but no other signs of fatty degeneration of the heart. I might say here that the heart action improved after the application of a blister to the chest. He has made a good recovery."

* * *

THE Sixteenth annual report of the Buffalo State Asylum for the Insane has been issued. It shows a total of nearly four hundred patients. The value of the training school for attendants here established is shown, since, in two emergencies, lives that might otherwise have been lost were saved by attendants. We congratulate both the community upon having such an excellently managed institution in our midst,—and Dr. Andrews, its able superintendent, upon the excellent scientific work which he is doing there.

We extract the following from his notes upon a series of trials of urethan, one of our latest hypnotic novelties:

"In all these experiments the sleep seemed to be of a strictly physiological character. Its approach was normal, and on awakening there was no headache nor any other feeling than that of having been aroused from pleasant sleep. There was no subsequent disturbance of the stomach of any kind, and, in fact, nothing to distinguish it from a pleasant period of repose."

"The drug was taken simply dissolved in water and no attempt was made to cover it. The taste is not unpleasant, resembling in a mild degree that of spirits of nitre."

"For administration it can readily be covered by any of the ordinary excipients. In regard to the tracings taken, I was unable to make out any marked effect upon the character of the pulse, except a reduction in the number of beats; hence these are not presented."

"On analyzing the cases of which notes were taken we find that there were nine of women and nine of men. Divided as to forms of insanity, acute mania, six; paresis, four; melancholia, four; chronic mania, two; dementia, two."

"The dose most commonly given was thirty grains. In two instances, however, it was carried to the extent of sixty grains. This was ventured upon after my personal experience with the same dose."

"So far the results have been quite favorable, and show that urethan has marked hypnotic power. There were in no case any unpleasant results of any kind. There is nothing to indicate any further action upon the cerebrum. The effects of the drug were felt, so far as we are able to judge, within an hour after its administration, and the sleep lasted in most cases from the time of observation, commencing at ten o'clock, until five o'clock in the morning."

Society Proceedings.

UTICA MEDICAL LIBRARY ASSOCIATION.

Reported by J. G. Kilbourn, M. D., Sec'y.

The last meeting of this association was held at the residence of Dr. E. D. Fuller, February 7.

Dr. Hamilton S. Quinn read a paper on "One Form of Acute Pericarditis in Children." (See page 163.)

Dr. Gibson considered it a serious disease, especially when complicating rheumatism or pneumonia, but thought when it was seen early with rheumatism it could be aborted by oil of wintergreen, used internally, and by inunctions. He recommended anti-rheumatic remedies, especially the salicylates.

Dr. Ford said he often met with the results of inflammation of the serous membranes where the acute trouble had been overlooked. He thought rheumatic pericarditis comparatively fatal, and advised the salicylate treatment in connection with alcohol and digitalis, and small and repeated blisters over the heart.

Dr. Seymour would not use blisters or anything that might possibly shock the patient, and thought the recuperative powers in children so great that they usually recover rapidly if no depressing remedies are used, and the strength is sustained by proper nourishment. He recommended the salicylate treatment.

Drs. Deecke and Baker Simmons reported cases of acute pericarditis.

Dr. Russell thought the salicylates irritate the kidneys. He would give bicarbonate of sodium or potassium. He thought no treatment would destroy the rheumatic poison, that the disease would run a regular course, and that we should aim to keep up the strength, prevent complications and relieve the symptoms.

Dr. Quinn, in closing the discussion, stated that he desired to call attention to the fact that his paper was on "One Form of Acute Pericarditis in Children"—a form due, in all probability, to the *rheumatic cause*—but a form of acute pericarditis which is not a mere complication of acute articular rheumatism. He also stated that he objected to the use of salicylic acid, the salicylates and sodium, inasmuch as they are cardiac depressants, and as such tend to defeat what in the main he believes to be our aim in treatment beyond the use of alkalies.

Book Reviews.

ANTISEPTIC MIDWIFERY. By H. J. Garrigues, M. D. Pp. 128. The Physicians' Leisure Library. Detroit: G. L. Davis.

If the series is kept up to the level at which it has been started, it will certainly be a most useful addition to the physicians' library. Dr. Garrigues' little work is one of the most valuable contributions to obstetric literature which has been given to the profession from this country in a long time. Although short it goes to the bottom of a most weighty question and puts the whole thing so clearly and precisely that it cannot fail to impress every reader with its importance. We earnestly advise every subscriber to the PRESS to read it so that they may have a fair idea of the opposite side of the question to that recently presented in these pages.

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION. Eighteenth Annual Session. Pp. 691. April, 1886.

We see in this volume evidences not only of a larger amount of work done than was shown during the previous session, but also of positive advances made. We have not space in which to make detailed mention of papers; those which strike us as savoring most of originality or of novelty are by Dr. Briggs, on Lycopus Virginicus —bugle weed—for stings and bites of venomous insects and reptiles; by Dr. O'Brien, on Opening the Trachea for Extraction of a Watermelon Seed, and by Dr. Starkey, on Obstetrical Heresies. The annual reports by standing committees seem to have been carefully prepared, and are commendable summaries of recent work, especially so that on Jurisprudence by Dr. Talley; a long prize essay by Dr. Briggs is appended, having for its indefinite title, Reflections on Physical and Mental Culture, the exact drift of which could not be apparent without perusal. It is a little unfortunate that several of the published papers should have titles which convey no idea as to their subject matter. The general appearance of the volume is creditable, and its make-up for the most part good; but the proofreading, especially of proper names, has been singularly careless. We see in these annual volumes prophesy of a great future for the Texas profession; as their work shows forth here it bespeaks a maximum of practical ability without a maximum of literary training in *belles lettres*.

BOOKS RECEIVED.

From D. Appleton & Co., New York:
  Text-Book of Surgery: J. B. WYETH.
From P. Blakiston & Co., Philadelphia, through Peter Paul & Bro.:
  Winckel's Disease of Women: Ed. by PROF. PARVIN.
  Materia Medica, Therapeutics and Pharmacology: POTTER.
  Diseases of the Skin: M'CALL ANDERSON.
  Quiz Compend of Surgery, 3d Ed.: HORWITZ.
  Compend of Electricity: MASON.
  Quiz Compend of Obstetrics: LANDIS.
From Geo. S. Davies, Detroit:
  Determination of the Necessity for Wearing Glasses: D. B. ST. JOHN ROOSA.
  Granular Lids and Contagious Ophthalmia: W. F. MITTENDORF.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge.* Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

ACCORDING to the Chicago *Town Topics*, a story is going about that a certain "fayre ladye" who has made herself more than prominent in social and amateur theatrical circles, and in wearing an extremely low corsage, was anxious to be vaccinated before her recent departure for Europe. She consulted her physician on the subject, impressing upon him the absolute importance of performing the operation where it would not be seen, so that it would not interfere with her social and dramatic engagements. The doctor thought deeply on the all-important subject for half an hour, and then advised her to swallow it.

ABOUT TO CHANGE HIS PROFESSION.—"Trampin's played out," said a sad-looking specimen of his tribe, as he hugged the red-hot stove in the station; "trampin's no good any more, an' I'm goin' to change my perfeshun." "What are you going into?" "I'm goin' to be a mind-cure doctor."—*Chicago Herald.*

The Medical Press
of Western New York.

Vol. II. MAY, 1887. No. 5.

IS MODERN MIDWIFERY MEDDLESOME?*

BY DAVID LITTLE, M. D.
Rochester, N. Y.

No apology is offered for taking your time and vexing your patience with this well-worn topic. It is not presumed that this paper will merit the meed of originality. It is rather proposed to resurrect some old ideas in the hope that, like wheat from the pyramids, they may, under the heat of discussion, germinate and bring forth some fruit worth the while.

Looking back upon what has been said and written and done in the art obstetric, one is reminded of the truant who, in excuse for not getting to school, said it was so slippery that he slid back two steps to every one he took forward, or of that other one, whose altered pants, too full in front, made him uncertain whether he was going to or fro.

Authorities from the dark ages down to now have varied, differed and contradicted as to the correct conduct of labor.

In this, our day, the doctrine mainly preached is to aid and abet with might and main.

Confronting disease, the physician interrogates nature, and the more he learns the less he is inclined to interfere with her processes. In the physiological process of labor, where the functions run smoothly with no embarrassment of diseased action, there would surely seem to be less warrant for meddling. Does the average doctor—does the obstetric teacher who assumes to speak *ex cathedra*, act on this broad principle?

Take a case of normal labor and follow it through—watch him and hear him, severally.

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* Read before the New York State Medical Society, February, 1887.

First stage: "Lie on your back"; "lie on your side"; "lie with your head raised"; "take the sitting position"; "try kneeling"; "walk about"; etc., etc. Why not let her alone? Her own instinct will best tell her how to act and how to posture. Examining, a head behind the bag of waters is felt in the left occipito-anterior position. That ought to suffice after a pain and an interval. Does it? A digital examination is not altogether pleasant for a woman, or void of danger. In this early stage, with fœtal head high up, the index and middle fingers thrust home to the haunt of the uterine inhabitant, with knuckles pressing rudely on the perineum, and thumb bearing hard on the sensitive clitoris—to express it mildly, hurts a woman's feelings. Anyhow she shrinks and plainly shows she does'n't like it. The hurting is hurtful, for pain is nature's danger signal. But, aside from mechanical irritation, that fateful forefinger may be an innoculator, a vehicle of disease germs more rancorous than any mechanical rudeness, and more certain than the defamed "beards" and "coat tails" of the *Medical Record*, because it carries the poison home, places it in *medias res*, where, loving darkness rather than light, it can best put in its villainous work. Then there is the chance of accidental early rupture of the membranes, which, occurring, is a common cause of tedious labor and lacerated cervix with all their attendant and sequent troubles. The touch, then, like drugs, should be regarded as a necessary evil. After the first exploration, in the absence of malposition, let the index model its behavior on the etiquette of angels with visits few and far between. What need of more until the second stage of labor? And if needless, then every such intrusion is unmitigated officiousness. How many of us act on this principle?

During the second stage (presuming normal parturition) the same rule of "*Noli me tangere*" obtains. "How about the perineum?" Well, to be sure, there is the perineum. That is a pet play ground for learned obstetricians, but how they quarrel over it; "support it with the palm of hand"; "press against it with a folded napkin"; "carry it forward"; "retract it"; "snip it on either side with scissors"; "carry fœtal head forward with finger in rectum"; "oppose urgent pains by direct pressure against the oncoming fœtal head"; "place woman in posture to make child gravitate away from perineum." (Query: By standing her on her head?)

Amid all this various and contradictory advice of so-called authorities, what is the bewildered practitioner to do? Why, like Abraham Lincoln in his dilemma, let him "stand still and see the salvation of the Lord," and "ten to one," if he has n't given ergot in his hurry and folly, the nine month's tenant will come out triumphant, with no rent to pay, or, if any, but a slight matter of a torn fourchette.

Now for the afterbirth.

The tired doctor, holding the scales, puts on one side the weight of his weariness, his easy chair, his bed, his breakfast, his waiting patients; and on the other the well being of the woman in hand.

> "Where self the wavering balance shakes,
> It's rarely right-adjusted."

And so he seeks excuses (reasons he calls them) for hurrying away the placenta.

First—To get his patient out of her misery and into her rest.

Second—To ensure permanent contraction and so avoid danger of hemorrhage.

The first object is valid if the aims noted in the second are always or often obtained. The generally accepted mode is by Crédé's method of expression or extrusion. For long, midwives, and obstetricians after them, caught at the readiest means of extraction by the cord that hung so temptingly at hand. And they might have defended the practice by appealing to the lessons of nature, the weight and struggling of the new-born animal exerting no little tension upon the umbilical cord. But experience of ruptured cords, torn placentas, post-partum hemorrhages and inverted uteri, has sent the practice into "innocuous desuetude"; and so instead of pulling we have come to pushing as a safer proceeding. Is it? In the first place it is painful, and this fact alone should have its weight. "In all conscience" the woman has suffered enough without adding needless pangs. Next, it is opposed to a well-known law in the physiology of muscular action, viz., that violent and long continued muscular action exhausts its irritability, *i. e.*, its contractility. This explains the intermitting pains with the intervening periods of rest during labor. This explains why in tedious labors morphine is better than ergot. It is a common experience to note that after a strong pain comes a correspondingly long period of rest. And so after nature's supreme effort in expelling the child she takes a long rest, for her powers for the time are exhausted, and now it is safe to wait. No child life in jeopardy, and no hard body to press against and threaten the integrity of maternal tissues. How long a rest ought she to have? Answer: Let the measure of her rest not be taken in minutes or hours, or by the waning patience of her attendant; rather let time wait on nature and patience have her perfect work. "They also serve (and serve best) who stand and wait." No interference unless called for by flooding.

Suppose we wait what we call a reasonable time. and not for nature's time, and then begin the Crédé manipulation. Doubtless the uterus is incited to contract, but it is before it has regained its full contractile powers, and speedy relaxation ought to be expected. In the writer's former practice of "Expression" such a natural result was realized too often for his comfort. Copious hemorrhage was not infrequent. Since the abandonment of Crédé's method no troublesome post-partum hemorrhage has occurred in his experience.

It must here be acknowledged that tables comparing the Crédé with the expectant method (to which the writer has found access) charge a slightly larger percentage of hemorrhage to the expectant plan. But figures are not always trustworthy. It does not appear from any of these tables what is meant by hemorrhage. What is the measure of excess? As in menstruation, what would be normal in one woman might be excessive in another; and then doctors may differ in their notions in this matter. To construct a table of figures on so uncertain a basis, *i. e.*, without actual measurement of blood effused, is a mathematical absurdity. Such a table can carry no weight.

Furthermore, tables are often untrustworthy because they are dishonest. The figures are liable to lean with the bias of the compiler. Compare, for example, the familiar tables of Dohrn and Stadtfeld as to the percentage of fever following respectively the methods in question. Dohrn gives the ratio 22.2 after Crédé's, to 19.4 after expectancy. Stadtfeld more than reverses the figures, giving Crédé but 18.3 to 24 for expectancy.

Which are we to believe? Medical science is too uncertain, and there are too many hidden factors and unknown quantities, to make a resort to mathematics in the elucidation of its conundrums at all satisfactory.

It has been said that handling the womb after the manner of Crédé is painful. Does this mechanical violence to a tired and tender organ involve no danger? During the last few years supra-normal temperature, following labor, has become so frequent in the experience of many physicians, that, in place of the exception, it has nearly come to be the rule, and this in spite of antiseptic precautions.

With eyes focussed on disease germs, are we not becoming blind to other factors that go to make mischief?

"*Uteroque repercusso insonuere*" meant danger to the unheeding Trojans. The murmurings of the agitated uterus, in quickened pulse and heightened heat, as well in these days tell us to beware. After expulsion of placenta "look for damages to the floor of the pelvis." So say authors and authorities. Is it torn? "Sew it up here and now." It is here and now affirmed that (laceration of sphincter ani excepted) this operation is unsurgical, is unnecessary, and is fraught with evil.

Consult any work on surgery, refer to your own surgical experience, and what is the verdict as to the proper treatment of torn and contused wounds elsewhere? Do you sew them up and expect or hope for immediate union? Is there no danger of shutting in gangrenescent tissues and of strangulating the swelling parts in the embrace of the unyielding sutures? No fear of septicæmia or pyæmia from detained detritus and pent-up pus?

Only a few weeks ago the writer saw just this condition, which explained the fever which was grave enough to demand a consultation. Snipping the wires relieved tension, and let out a few drops of pus, and the threatened fever was exorcised.

And yet this measure is urged not alone to repair damages, but also to prevent absorption of materies morbi from uterine discharges. Well, then be thorough about it; go back to the lacerated cervix, which is always there, and repair that, and then follow up the good work by searing over the placental site. Again it is claimed: "This immediate repair is needful to prevent subsequent prolapsus uteri." Indeed! (to borrow a simile) will the foot gear beneath the "lean and slippered pantaloon" serve to hold up the suspendered waistband? For that is about the relation that the perineal body sustains to the vagina, and through it to the womb with its ligaments and guy-ropes to hold it in place. In point of fact, it has been observed time and again, that with complete perineal rupture even to the extent of a recto-vaginal rent, reaching to within an inch or two of its neck, the uterus has retained its place ready and competent for a new impregnation. Admitting that prolapse of rectal wall, through ostium vaginæ, is an evil that a falling womb occasionally follows, it is still claimed that the procedure in question (immediate suturing) is unnecessary.

In a practice of nearly thirty years, the writer has never taken this "stitch in time," having no fears of the coming "nine," and he cannot recall a case where nature did not, unassisted, heal the breach. Holding the thighs together by a fillet around the knees, keeps the lips of the rent in accurate apposition, and yet permits free drainage, and so answers all the purposes of stitching without its drawbacks. In the rare cases of non-closure, a secondary operation can be resorted to; and here is legitimate surgery, sound in principle, safe in practice, and happy in results. For now the woman has passed out of the puerperal state, and the clean surfaces, made by the knife or scissors, readily unite. Hence, it is urged that it is rational in all cases of rupture (not involving the sphincter) to wait for natural repair, and this failing, there is time enough (and a better time) for the surgeon's office.

Is modern midwifery meddlesome? Some special meddlings in special stages of labor have received attention. But what shall be said of a meddlesomeness that has its beginnings at the first hint of approaching accouchement, continues its officiousness throughout the throes, and only ends with the last drop of lochial discharge?

The celebrated Ten Commandments of Thomas, issued some years since, based on the theory that puerperal poisons seek entrance mainly through the genital tract "summarily comprehended," would inundate the parturient woman, and saturate her surroundings with a poisonous solution; by spoliation of furniture, convert the cheeriness of her chamber to a barnlike blank; and by the very "pomp and circumstance" of preparation, fill her mind with fearful forebodings of the ordeal awaiting her. Happily these rules, in private practice, are impracticable and have not been generally adopted. Rules 3, 7 and 8, relating to vaginal washings, have, however, been widely observed in one or more of their details: "Giving the douche and bathing the vulva every four hours during labor, and once in four to eight hours thereafter for at least ten days."

From the literature of the subject, it is gathered that women do better without post-partum injections, and these have therefore been largely abandoned, and yet the ante-partum irrigations are retained and insisted on. Why? If these flushings fail to be of use after labor, where the genital tract, bruised and torn, is bathed in lochia, and open to ingress of air borne germs, what object is sought in washing an integral vagina in front of the descending head?

One thing relatively in its favor is, that this is a time when it is least likely to do harm. That it is innocent, though, may be questioned, when it is considered that the secretion of the vagina (nature's lubricator), is thus removed. *The part to render aseptic is the attendant's finger.* A physician is ordinarily a gentleman, and disposed, habitually, to keep his fingers and nails clean, elsewise he has no business to approach a woman under these or any other circumstances; and moreover, out of deference to the prevailing dread of germs, he will arm his finger and person with the "latest thing" in germicides.

The objections here offered to the vaginal douche (whether before, during, or after normal labor) are

First—It is unnatural.

Second—It is irksome and troublesome to the patient.

Third—It is dangerous, and

Fourth—It is unnecessary.

That the procedure is unnatural "goes without the saying." If the fountain syringe is so indispensible, beneficent nature should have established a well-spring of life within the uterus wherewith to wash away the detritus of labor and any stray seeds of evil that may have taken lodgment from without. And, indeed, she has one with a free and steady flow. Only when this stream is scanty or offensive need mischief be feared. To use the syringe, therefore, is not only unnatural, but it is a work of supererrogation. That it is irksome and tiresome to the woman who wants rest is likewise almost a self-evident proposition. The discomfort arising from the manipulation of the stretched, torn and tender vulva and vagina, the wetting, lifting, and exposure, combine to render the douche extremely distasteful. That it is dangerous is proven by the fact that the poison in the solution used may be absorbed. From various quarters come news of mercurial poisoning from this cause. From one to one thousand the strength has been reduced to one in ten thousand (for this strength is said to serve as a certain antiseptic). Then, as has been said by some obstetricians, it has been abandoned altogether as a post-partum measure, because women were more apt to die with than without it.

That the measure is unnecessary is a corollary of the foregoing proposition, for what is harmful is certainly not needed.

In conclusion, it need hardly be said these strictures on prevailing practices are meant only to apply to normal labor. When all goes well in this physiological process, let well enough alone. In these days of abnormalities incident to woman's so-called higher culture, with her overwrought nerves and underworked muscles, and her viscera handicapped by the vicious weightings of fashion, the accoucheur finds ample demands for helping (but never for hindering) hands.

THE MICROSCOPE IN THE DIAGNOSIS OF DISEASES OF THE SKIN.

BY ERNEST WENDE, M. D.
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[Read before the Alumni Association of the College, March 1, 1887.]

To the general practitioner the diagnosis of skin diseases is often a perplexing and irksome matter. This arises chiefly from the various classifications advanced, and from the various appellations assigned to the same disorder. Yes, many a physician in failing to determine the true nature of the difficulty, and from his unsuccessful course of treatment, has been compelled to take sides with the great John Hunter in his recognition of but three classes:

Those that sulphur will cure, those that mercury will cure, and those that the devil himself can't cure.

Yet, as further difficulties besetting the diagnosis of cutaneous affections, we may mention, a tardy investigation, the effects of previous medication, an unusual form of the same malady, an uncommon site of the lesion, several well-defined forms infesting the same locality, and the constitution of the individual.

It is also well to bear in mind that diseases may resemble each other; that an eruption may alter its appearance during its progress; that the usual clinical course may deviate and become irregular, and that there may be present distinct and well-marked varieties.

Should accuracy be aimed at, the physician must be expert in the identification of each of them so that he may not be liable to mistake one for another, overlooking nothing that is important to the patient, that is essential for successful treatment, and for a just prognosis.

It is right in doing so not only to try and recognize the disease by its own definite and special characteristic eruption, but also by the exclusion of others with which it is likely to be confounded. Nor can any one hope to treat cutaneous diseases with even ordinary success without a thorough appreciation of the nature of the morbid process and its cause.

To accomplish this frequently demands a careful and a detailed microscopical examination, in order that a more rational observation of the actual changes produced within the tissues may be obtained and a better knowledge of the etiological factor may be acquired.

Therefore the microscope has become of indispensible service in the diagnosis of skin diseases. The microscopical observer is necessarily confined to a skillful application of his instrument, looking behind and beyond any symptom or set of symptoms for an explanation,—for a cause. Many are the impurities both physical and organic, and many are the parasites both vegetable and animal, that are perpetually found giving rise to those conditions of which the symptoms are but mere expressions.

The day of judging disease solely by signs is past. The cure on general principles, of combating inflammation, of allaying irritation, has given place to the more sound treatment of the structural alterations of the diseased cutis and its source.

A most radical change has come about with reference to the popular idea conveyed by a contagium vivum. The early views of the naturalists Réaumur and Linnæus that many ailments were due to the invasion of the organism by germs was considered but a mere hypothesis until the wonderful powers of the microscope revealed their relation to disease, and I know no organ of the human frame where the contributions are more apparent than in the various disorders of the integument. To the vast amount of information already afforded, new facts are almost daily added to substantiate this theory, the germ theory of disease.

The presence of micrococci and bacteria has been demonstrated in the eruptive fevers. Erysipelas has been traced to a distinct germ. In leprosy the bacillus lepræ may be utilized before rendering a verdict.

Anthrax as it occurs in man, a localized yet a spreading necrotic condition of the skin and subcutaneous tissue, is occasioned by the development in the blood of the bacillus anthracis. The diagnostic value of its disenchantment is beyond all controversy.

Glanders, too, within the last few years has helped to swell the ranks of human evils traceable to a bacterial origin.

Since that salient diagnostic discovery of the bacillus tuberculosis, which every physician who makes any pretension to scientific treatment must comprehend and be able to detect, further investigations have shown that we also have tuberculosis of the skin, in the form of small ulcers having soft, slightly infiltrated and jagged borders, generally seated in the vicinity of the mouth, arms, vulva and glans of phthisical subjects, and undoubtedly due to auto-inoculation.

These superficial ulcerations can be easily discriminated on the finding of the tubercule-bacilli in their secretions. And then again lupus, a disease that remains localized for a number of years, and after considerable destruction and cicatrization of tissue finally disappears, is asserted, on good authority, to be nothing more nor less than tuberculosis of the skin.

Lustgarten, in a recent monograph on the etiology of syphilis recognized a well-characterized bacillus, which is destined to become of the utmost importance in the diagnosis of this complaint as soon as a better method of staining is devised.

The bites of snakes and spiders, and even the breaking out of poison ivy, are attributed by some to a bacterial agency.

Having no more than alluded to those diseases of the skin caused by some of the lowest types of vegetation, the class of schizomycetes and order of bacteriaceæ, the most minute and simplest of all plants, I will also briefly refer to those cutaneous affections or dermatomycoses, produced by the mould fungi or hyphomycetes, which may be readily and positively differentiated by the aid of the microscope.

The mycoses or fungoid disorders of the skin are easily divisible into four principal forms, familiarly known as herpes tonsurans, favus, pityriasis versicolor, and erythrasma.

Favus is a disease found mostly on the scalp, resulting from the existence of achorion Schönleinii, a fungus discovered by Schönlein in 1839. It is supposed to be transmitted to the human species from some of our smaller domesticated animals, and especially from the cat, which, it is surmised, becomes innoculated from mice.

Although well portrayed by its pathognomonic scutulæ, or favus cups, which are friable crusts varying in size from a pin's head to a pea or even larger, circular in outline and of a straw color, with an elevated periphery and central umbilication, usually perforated by a hair, yet there are cases where these important and destructive features are lost, necessitating a microscopic examination with the intent that a correct idea of the real trouble may be formed.

A scutula, when ground up and investigated, is found to consist of an admixture of epithelium, pus-cells, fat-globules and various debris, among which the parasitic matter is seen to exist in a very profuse state, composed of a ramification of an enormous quantity of threads, curved, equally segmented, and at times branched; also an endless number of conidia, many free, and others joined end to end like strings of beads.

Herpes tonsurans includes all such ailments as herpes tonsurans vesiculosus, maculosus and squamosus, herpes tonsurans capillitii, sycosis parisitaria, onychomycosis tonsurans, and eczema marginatum, all of which unite in having a common origin, the tricophyton tonsurans first recognized by Gruby in 1884. There are variations in the appearance of this group of diseases dependent on whether the parts are covered with hair or not.

With regard to the detection of the fungi of the different dermatomycoses, the epidermis scales, as well as the hair of herpes tonsurans and favus, should be treated with a solution of potash 1:3 when on the object glass, whereby the epidermis will swell and clear up, rendering the fungi distinctly visible. In the case of herpes tonsurans it is seen to be made up of slender slightly forked filaments of mycelium, numerous transparent spores and spore-rows.

As all hairs of the diseased portion are not invaded by the fungus, in some instances not one in fifty, therefore with a view of saving time another method, not generally known, may be advantageously employed, and especially in the examination of the disintegrated hair-shafts of sycosis; that is by first saturating the hair with chloroform, which will turn all such containing the parasite chalk white, and those having this reaction may be further treated with liquor potassæ and examined.

Erythrasma simulates pityriasis rubra in cast of countenance, and eczema marginatum in location. It can be readily determined, however, by washing a few epidermis scales in alcohol followed by the addition of the customary solution of potash; which will clearly elucidate its vegetable growth, the microsporon minutissimum first described by VonBurchardt. The elements of this parasite are exceedingly minute, rather abundant, and generally arranged in clusters.

Pityriasis versicolor, as it is commonly seen in the adult and often in those of a phthisical diathesis, is an affection produced by the microsporon furfur; a fungus brought to light by Eichstedt in the year 1846.

For the most part it is a disease that appears in variously sized patches of a peculiar yellow or fawn color. At first the spots are small, round and distinct, but finally they gradually coalesce, forming large fantastic areas well defined by irregular or roundish borders. This spreading discoloration is always confined to those parts of the body protected by clothing, and its favorite seat is most often the chest. In spite of its individuality as to location, coloration and configuration, there is probably no disease of the skin which is maltreated so repeatedly as pityriasis versicolor. Consequently, before you consider it "liver spots," and treat your patient for a hepatic arrangement, for God knows the liver has sins enough of its own, and before you thrust down the throat of the unfortunate immense doses of mercury and iodide of potassium for months or even longer, under the suspicion that he has contracted syphilis, remove a few scales from the diseased surface, add your liquor potassæ, and place them under the microscope, when without fail you will get the true meaning in the form of many bunches of heaped conidia and a generous bisection of numerous jointed filaments.

The diagnosis of actimycosis, a disease only of concern to the dermatologist on account of its accompanying fistular tracks, can be made only by a microscopic examination. Although discovered within the last decade it cannot be considered altogether rare, from the number of cases that have been reported. It is caused by a ray-fungus called actinomycis whose place in the vegetable world is still in doubt, though of late the bulk of evidence seems to relegate it to the bacteria.

As our instruments continue to improve, and as our methods of investigation become more perfect, microscopy will add others to this list of maladies due to a fungoid origin. Even to-day psoriasis, impetigo contagiosa and alopecia areata are seeking admission.

It has also been shown that certain morbid conditions of the skin depend upon the parasitic existence of lower animals. From our present knowledge of the influences which originate these abnormal processes, who could dream of the itch without figuring to one's fancy, the sarcoptes scabii hominis, its cause? Who would venture a well-founded diagnosis in cysticercus cellulosæ cutis or in echinococus cutis without exposing the immature animal of the former, and the rostellum, with its hooklets, of the latter, in the secrets of their prison-house? And in the tropics would you not look for the filaria or its embryos as the occasioner of elephantiasis Arabum and chyluria?

Again, quite a diversity of foreign matter setting up irritation or bringing on pigmentation may not infrequently be unearthed by an adroit use of the microscope.

For instance, in the connective tissue of argyria the finest particles of silver are revealed. In tattooing, the pigment can even be traced to the adjoining lymphatic glands, while in chloasma the granules productive of this abnormal pigmentary deposit are only found in and around the rete cells.

Furthermore, for the purpose of differentiation in all indefinite new formations, especially if considered malignant, the excision of a small portion for a microscopic examination should always be insisted upon with a view to realize the exact nature of the case under consideration, and also with a view to establish a reliable prognosis, and to render treatment satisfactory,—the most important object in practical dermatology.

CAUSE OF THE "WANDERING SPLEEN."

By Prof. G. Engle, in the Centralblatt für Gynakalogie No. 5, 1886.

TRANSLATED BY ARTHUR M. BARKER, M. D.
For The Medical Press.

Changes of position in the viscera of the abdomen are more common among women than men.

The physiological reason of this phenomena is due to those peculiar circumstances dependent on the enlargement, change of position and form of the uterus, incident to the menstrual period.

When the uterus, in consequence of pregnancy or from the pressure of new formation, becomes enlarged and has not sufficient room in the pelvic cavity, it expands and is lifted up towards the cavity of the abdomen, pressing against the organs in the immediate vicinity, as well as those higher up, causing them to become displaced. In consequence of this displacement the ligaments which hold them in their normal position become relaxed and stretched, and this condition may remain even after the cause of the pressure has been removed by birth of the child and perfect subinvolution of the uterus. The placid condition of the walls of the abdomen, which not infrequently remains in a high degree after the birth of the first child illustrates this very plainly.

The spleen is one of the fixed organs of the abdominal viscera, and is, perhaps, the most frequently enlarged; but it is very rarely observed as a wandering organ.

The reason of this is, partly, because the normal position of the spleen can be determined only by a very precise examination, and partly because the different diameters of the spleen can not be mapped out and positively determined by percussion. It is even difficult to locate the anterior or most prominent part of this organ, especially if the left flexure of the colon is filled with excrementitious matter. It is undeniable that the location of the spleen, in many cases, cannot be determined by percussion.

The wandering spleen may easily be mistaken for an accumulation of fœcal matter, a wandering kidney, or with some form of movable abdominal tumor or a small ovarian cyst, or with a uterine or extra uterine pregnancy. When we discover a movable tumor in the cavity of the abdomen, we are apt to think of everything else rather than a wandering spleen, as it is not always characterized and accompanied with unpleasant or disagreeable symptoms. The possibility of the spleen becoming a wandering organ is primarily brought about by a relaxing and stretching of the ligaments. The spleen is remarkable as being the only organ in the body which shows very little inclination to idiopathic affections, but suffers secondary changes as a result of many of the constitutional and contagious diseases. The idiopathic diseases, for the most part, affect only the netted structure and cause but little change in the size of the organ. The principal cause of the wandering spleen is its enlargement and increased weight. This induces a loosening and stretching of the ligaments which fix the organ in its place. There are some cases, however, of wandering spleen due to the original laxity of the ligaments themselves; also cases due to external mechanical impressions. In a comparatively short time three cases came under my observation which are interesting, from an etiological, and especially from a gynæcological standpoint.

Case I.—Theresa S., 18 years of age, primapara, born in Poland, was received at the Maternity Hospital during the last week of her pregnancy. She was of a cachetic appearance and complained of dragging and pressing pains in the left side. She had been sick many times during her pregnancy, and was much depressed in spirits, any usual occupation being very burdensome, and she was tired most of the time. Several years ago she had a number of attacks of intermittent fever. She commenced to menstruate when sixteen years of age, but was irregular in regard to time, quality and quantity.

She did not know that she was pregnant until she felt life, as she had been troubled for some time with a painful swelling in her abdomen. At the commencement of her pregnancy her feet were swollen, but the swelling disappeared after rubbing them with an ointment. The circumference of the abdomen was ninety-three centimetres. The head presented normally in the first position. On the left side, twelve centimetres below the ribs, the percussion sound was dull. From the lower border of this line to the umbilicus the spleen could be felt. Pressure over the spleen caused dull pain.

Her labor lasted fourteen and three-quarters hours, the first period taking thirteen and one-half hours; the second, one hour, and the third one-quarter of an hour. The placenta weighed 550 grammes, and was delivered with a small loss of blood. The newborn child weighed 3,050 grammes, and was forty-nine centimetres long.

After the birth the lower border of the spleen sank to the left ileum, so that its distance from the ninth rib was twenty-two centimetres, and the left border covered the uterus in such a way as to interfere with an examination with the right hand. The upper border of the spleen was six centimetres below the ribs, and could be easily felt all around. The longitudinal measurement was fifteen centimetres, and the transverse, seventeen centimetres.

On the third day following her confinement the patient had a mild fever accompanied with considerable tenderness over the uterus. On the fourth day the fever disappeared. On the afternoon of the fifth day, without any apparent cause, the temperature rose suddenly to 39.1C. On the sixth day she was again without fever, from which time she continued to improve, and left the hospital on the twentieth day, well. Her treatment consisted of the administration of wine and of one-half gramme of quinia daily. When dismissed the uterus was in its normal position, the spleen was a little smaller, easily movable from right to left, and not painful to the touch.

In this case it is to be supposed that the pregnant and enlarged uterus pressed back the overbending wandering spleen, after a time, to its normal position, so that it could not disturb the uterus and cause premature labor. The new-born child was perfect and of the usual size.

Case 2.—Mrs. H. A., 28 years of age, moderately well nourished, married nine years, has had five children. During the fourth month of her pregnancy she noticed a movable tumor in the lower part of the abdomen, which lay in front of the uterus, forcing the umbilicus out so that it resembled a rupture. The tumor could be easily felt with the hands. Later it was pressed up higher, and during the last months of her pregnancy it disappeared so that she did not know where it had gone. After the birth of her child the tumor again appeared in the abdominal cavity, but to the right of the median line. During her fifth pregnancy the same phenomenon was repeatedly observed. After kneading the abdomen, however, the tumor disappeared.

At the present time she complains of the tumor temporarily appearing, accompanied with most severe cramps and dragging pains, and wishes to have it removed, it having been diagnosed by a physician as a wandering kidney. An examination showed the following: The walls of the abdomen were much relaxed. On the right side, in the lower part of the abdominal cavity, was discovered a movable smooth tumor having the characteristic shape of the spleen. The upper edge could be lifted outward and a notch distinctly felt which was smaller at the lower edge. The longitudinal diameter of the tumor measured eight centimeters, the transverse eleven centimeters. By making downward pressure upon it the patient complained of pains, dragging in character. By pressing it up toward the region of the umbilicus it moved of its own accord into the left half of the abdomen. Upon ceasing the pressure it would move back again into the lower and right half of the abdominal cavity. Percussion over the region of the spleen gave tympanitic resonance. Internal examination showed the uterus to be retroflected. At the anterior fornix, the lower border of the tumor as well as the movements produced by pushing it with the hands from side to side, could be distinctly felt. The woman was born in Poland, where she still lives.

She does not remember having had intermittent fever. When a girl she suffered a great deal from headaches, which left her as she became older. She commenced to menstruate when fifteen years of age, but was irregular both as regards time and quantity. During her married life she had her menstrual period only a few times, but it was very severe. Before she was discharged I recommended her to continue for a time some preparation of quinia and iron. Later, I heard that after following the treatment for several weeks she discontinued it, having been greatly relieved.

The correct diagnosis in this case was verified, because the laxity of the abdominal walls made it easy to grasp the enlarged spleen, and because of the absence of dullness on percussion over the normal region of the spleen.

Case 3.—Mrs. Johana N., 32 years of age, born in Poland, where she has always resided. Last summer she began to feel labor pains and sent for me. The house in which she lived was near the bank of a river, even with the ground and without a floor. It consisted of one little room with two small windows ; the atmosphere was damp and drops of clear water were dripping from the walls. I found the patient lying on a straw sack, suffering great pain and scarcely able to answer my questions. She stated that she had been sickly for the last fourteen months, and had not menstruated for sixteen months. She believed she was pregnant, and had suffered severe pains for the last three days.

The examination I was able to make, under the circumstances, on account of the unfavorable surroundings, was only superficial, and showed the following conditions : The patient is very much emaciated, breasts small and flabby and discharge no serous fluid. The upper part of the abdomen is expanded and hard. The lower part is filled with a swelling, very painful to the touch, resembling the impregnated uterus, reaching above the umbilicus, and corresponding to the sixth month of pregnancy. By an internal examination I found the anterior fornix of the vagina completely filled, and in the posterior fornix a resisting tumor. The vaginal canal was two centimeters long and about half the length of the index finger could be passed into the cervical canal. There was a slimy bloody fluid discharging from the vagina. She claimed to have felt life since the fourth month. The result of this superficial examination and the answers given to my questions led me to believe that the woman was pregnant and about to abort. The following day her pains had almost entirely disappeared, but her general condition was not changed.

After several days the pains left her and she was able to get out of bed and attend to her usual domestic affairs. For the purpose of making a more careful examination, I ordered her to come to my office and there I convinced myself that the diagnosis as made was incorrect.

She gave the following answers to my questions: She had resided in Poland until she was eighteen years of age, suffered from fever very often when young, commenced to menstruate when she was sixteen years old but was very often irregular. Since her marriage she had lived in the city. She has a little girl three years of age. Since the birth of this child her health has been very poor, but especially has she been very poorly during the last fourteen months. Ten months ago she slipped from a ladder and fell to the ground, since which time she has had great pain in her abdomen, and been obliged to remain in bed for a long time. From this time she felt a dull weight in the hypogastric region, her feet were swollen, and the abdomen was expanded. Later these symptoms disappeared and, as she did not menstruate, she thought she was pregnant, which, from her continual desire to pass water, confirmed her belief, as at her first pregnancy she had been greatly troubled by this symptom.

The circumference of the abdomen in the region of the umbilicus was eighty-eight centimeters. Liver and stomach in their normal position. Percussion over the normal region of the spleen gave tympanitic resonance. Under the umbilicus could be felt a smooth, prominent, and upon pressure, painful swelling. It measures in the transverse diameter twenty-one centimeters. The upper border is notched. The lower, because of its sinking into the pelvis, cannot be felt. The mouth of the uterus is closed and inclined toward the anterior part of the body. In the anterior fornix is felt a resisting swelling which can be pushed upward and lifted out of the pelvic cavity so that the lower border of the swelling can be felt through the walls of the abdomen. The longitudinal diameter can thus be taken, and measures thirteen centimetres. The posterior fornix is completely filled by the retroverted uterus. This examination confirmed the correctness of a surmise, that this apparent pregnancy was caused by a wandering spleen which sank into the pelvic cavity. The patient, according to my instructions, moved into a higher and dry building. She was ordered to take, every other day, one-half gramme of quinia with wine and nutritious food. At the end of two months she had taken fifteen grammes of quinia, her appetite returned, and her pain had disappeared. By continuing the treatment the spleen gradually became smaller.

The circumference of the abdomen after a half year's treatment measured eighty-two centimeters. The transverse measurement of the spleen was fifteen centimeters, and the longitudinal measurement, seven centimeters. The spleen can still be felt under the umbilicus. It also can be moved in all directions, especially from the region of the umbilicus upwards and to the left to a height where the distance of the upper border is only seven centimeters from the ribs. By discontinuing the pressure it sinks back into its former position. For the last four months she has menstruated regularly, both as regarding time and quantity. Of late she has had pain but once, and that occurred when she pressed her abdomen against the table to lift it.

The peculiar symptoms of this case are similar to those observed by Drs. Dielt and Rezek, in which the enlargement and position of the spleen led them to believe their patient was pregnant. This case also resembles in particular the one reported by Dr. Rezek, inasmuch as it was induced by mechanical violence, viz., a fall from some stairs. In the three cases reported I consider the enlargement of the spleen to be due to malarial influences, as all three of the women were born and lived most of their lives near the river Maros. The neighborhood of this river is noted as being one of the hotbeds of malaria.

When we consider that the malarial cachexia undermines the capacity of resistance of the organs, we can scarcely be mistaken when we attribute it as the cause of the wandering spleen. As a primary effect we have enlargement and increased weight of the spleen. As a secondary effect, from their very feeble powers of resistance, we have a relaxation and stretching of the ligaments. The reason of the wandering spleen occurring chiefly among women arises from those peculiar circumstances caused by the enlargement of the uterus and consequent displacement of the organs in the abdominal cavity. As a contributing cause, also, must be mentioned the relaxation of the walls of the abdomen following pregnancy and gestation.

The complications incident to the displacement of the wandering spleen, and its gravitation, are plainly illustrated by the three cases reported. The second and third cases show the effect of the pressure of the wandering spleen, where it sinks into the pelvic cavity upon the impregnated uterus. It being dislocated into the "*excavatio vesico-uterinalis*," the uterus becomes retroverted.

This experience teaches that the malarial cachexia as well as the pathological changes in the spleen, influence the physiological functions of the sexual organs. It is, therefore, quite natural that with such patients we very often find irregularity of the menstrual period, or even cessation of it for a considerable length of time.

Treatment.—In regard to treatment we endeavor to obtain a twofold result. First, to prevent the movability of the spleen; second, to relieve the pain and disagreeable sensations caused by its movability. I consider it as superfluous to mention the abdominal bandage, as it can give but little, and only temporary, relief to the pain. When we consider the malarial cachexia as the original cause of the wandering spleen, and treat it with that cause in view, we obtain the most satisfactory results. By the use of preparations of quinia and iron in ordinary doses, the spleen becomes smaller, and the dragging pains after a time dimish. The movability of the smaller spleen is now easier retarded by abdominal bandages; and even these will not be necessary, as I have shown in the three cases reported. The unpleasant symptoms caused by the wandering spleen become, after a time, more bearable, and even disappear entirely. In consequence of the stretching of the ligaments the blood-vessels also suffer, becoming contracted or degenerated. Even the spleen itself, in consequence of the scanty nourishment, becomes atrophied, or undergoes pigmentary or fatty degeneration. In consequence of the great movability of the spleen the vessels in the region of the hilus become turned or twisted, and form, in connection with the ligaments, a cord-like coil similar to a convolution, as shown by a case mentioned by Rokitansky, of a woman who had bled to death from placenta prævia, at the autopsy of which I assisted. The numerous twisted ligaments and vessels were atrophied, and the shrunken spleen had sunk down into the *cul de sac* of Douglass. Voigtel mentions a case in which the spleen was found free in the abdominal cavity without any organic connections. Mosler asserts that after the atrophy of the spleen the pains diminish, and are easier to bear.

The cases of extirpation of the spleen show satisfactorily that it is a superfluous organ, and that it has no particular function in the animal economy. I believe, however, that in all cases where the pains do not yield to treatment by the usual remedies, and where, as mentioned by Mosler, the direct wish of the patient raises the question as regards the propriety of extirpation, we should first attempt to bring about artificial atrophy and eventual degeneration before resorting to an operation. If we are unsuccessful in inducing artificial atrophy, we can extirpate the organ as a last resort.

To induce artificial atrophy of the spleen we should as nearly as possible imitate the method taken by nature itself. We grasp the organ from all sides, with both hands, and wind it several times around its hilus, by which manipulation the ligaments in connection with the vessels form themselves into a twisted cord and consequently cause a scanty or impeded nourishment which results in atrophy or fatty degeneration of the organ.

The relaxed condition of the abdominal walls renders it comparatively easy to pursue this method of treatment. It is obvious that abnormal growths of neighboring organs, or of the peritoneum, form a contra-indication to this method of treatment. To discover such changes, however, is not difficult.

PROF. BERGMANN, of Berlin, who not long ago took Langenbeck's place, has just declined the position of chief surgeon to the Willig's Hospital in St. Petersburg. This institution is a palatial hospital, fitted with all the imaginable appliances, and owes its origin to the former private physician of Alexander I., who devoted his whole fortune to its establishment.

THE EFFECT OF COBRA POISON.—According to *Nature* the taxidermist of a Ceylon museum received a bite from a cobra whose fangs had been removed, and which was consequently supposed to be harmless. Pain and nausea ensued and soon he ceased to breathe. Artificial respiration was kept up for *nine hours*, when he improved. He stated that he had been conscious all the time, but was unable to make his feelings known, not having power over a single muscle. He could hear and see, but there was no response when his eyeball was touched. The poison thus appeared to be a motor paralyzant. Unfortunately, although he recovered full consciousness, he died five days after the bite. The similarity of the poison in this case to curare will appear at once.

A DISINFECTANT.—A new disinfecting compound for purifying the atmosphere of a sick-room has just been presented to the Berlin Medical Society. Oils of rosemary, lavender and thyme, in the proportion of 10, 2½, and 2½ parts, respectively, are mixed with nitric acid in the proportion of 30 to 1½. The bottle should be shaken before using, and a sponge saturated with the compound and left to diffuse by evaporation. Simple as it is, the vapor of this compound is said to possess extraordinary properties in controlling the odors and effluvia of offensive and infectious disorders.

A physician living on the seaboard, thus writes to a paper: "Within the last five years, in a district embracing sixty square miles or so by the sea, I have noted the hour and the minute of no less than ninety-three demises in my own immediate practice, and every soul of them has all gone out with the tide, save four who died suddenly by fatal accident. It is a riddle—a mystery. But I, who have sat with my fingers on the wrist of many a feeble patient, and noticed the pulse rise and strengthen, or sink and vanish with the turning of the tide, know that it is a fact."

THE SWORD IN MODERN WARFARE.—Col. Methuen stated recently in the course of an address, that in the Franco-German war only six Germans owed their death to the sword, and that the total number wounded with this weapon, with which the Romans conquered the world, was only two hundred and twelve.—*British Medical Journal.*

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BUFFALO, N. Y., MAY, 1887.

NOTICE.

The Editorial Office of THE MEDICAL PRESS OF WESTERN NEW YORK has been removed to 510 Delaware avenue. Correspondents and exchanges will please note the change of address.

LOCALIZATION OF CEREBRAL FUNCTIONS.

The best epitome of our knowledge concerning the localizations of the functions of the brain that we have seen is to be found in Stümpell's excellent Text-book of the Practice of Medicine. For the convenience of our readers we give it herewith:

1. The most frequent cause of ordinary hemiplegia is a lesion of the pyramidal tract in the posterior limb of the internal capsule. If the hemiplegia is persistent, then this tract is actually destroyed; if temporary, the tract has been functionally deranged for a time by focal disease in neighboring parts of the brain.

2. Monoplegic cerebral paralysis is usually due to affections of the cortex of the brain, that is, the central convolutions and the paracentral lobule. Monoplegia of the face and tongue is the result of lesions in the lower extremity of the anterior central convolution. Monoplegia of the arm is referable principally to some lesion of the middle third of the anterior central convolution. Monoplegia of the lower extremity implies some affection of the paracentral lobule.

3. Hemiplegia or monoplegia, if associated with epileptiform convulsions affecting either one-half or one particular portion of the body, are almost always caused by cortical lesions. These same symptoms of motor irritation without accompanying paralysis are likewise ascribable to some irritation of the above-mentioned regions of the cortex.

4. Hemiplegia with crossed paralysis of the oculo-motor nerve indicates a lesion of the crura cerebri.

5. Hemiplegia with crossed facial paralysis implies, with an approach to certainty, that the lesion is situated in the pons.

6. Post-hemiplegic chorea seems to occur especially when there is focal disease in the neighborhood of the optic thalamus or of the posterior part of the internal capsule.

7. Hemianæsthesia (of the skin and of the organs of special sense) seems to result principally from lesions of the most posterior portion of the internal capsule.

8. Hemiopia may be due to a lesion of the occipital lobe. Probably, also, a lesion of the posterior extremity of the internal capsule may cause it; in which case it is usually associated with hemianæsthesia. Finally, it may be produced by affections of the posterior tubercle of the optic thalamus, or of one of the anterior corpora quadrigemina, or of one of the optic tracts.

9. Genuine motor aphasia indicates disease of the third left frontal convolution.

10. Word deafness seems to be due to disease of the first left temporal convolution.

11. Difficulty in articulation implies disease of the medulla, as does also dysphagia.

12. Staggering gait and vertigo are the most constant symptoms of cerebellar disease. Forced positions and forced movements are seen chiefly in connection with lesions of the cura cerebelli ad pontem.

SOME POINTS IN THE PATHOLOGY OF PERITONITIS.

A most important contribution to the study of the action of micro-organisms in the production of peritonititis has been recently made by Grawitz in the *Charité Annalen, XI. Jahrg., p. 770.* Wegner had already shown the three important features of the peritoneum, its great area, and the large amount of fluid which it can either exude or absorb. He showed, by experiment, how much air or serum, bile or even urine it might quietly absorb, and how solid particles were encapsulated. He showed, also, that living defibrinated blood never decomposed, and that only when air or putrescible fluids were introduced in larger quantitles than could be absorbed did septicæmia ensue. In Wegner's experiments the effects were due to bacteria of decomposition, those of suppuration being then unknown. Now, however, we know that suppuration cannot be caused by chemical irritants, but only by certain specific bacteria, and by these usually only under favorable conditions.

Consequently, we are not unprepared for the results of Grawitz's experiments. He showed that the introduction into the peritoneal cavity of healthy rabbits of the ordinary forms of microbes, or of the same with putrescible albuminous material, or even of fecal matter, produced no peritonitis if the amount was not greater than the peritoneum could absorb or encapsulate within a given time, *i. e.* about one hour. Even pure cultures of the pyogenic bacteria, provided the fluid was not chemically irritating, and in amount not over 10 m., produced no inflammation in a normal peritoneum. But they did——

When stagnant fluid was present, the organisms developing faster than they could be absorbed; or,

When irritating solutions had prepared the way for them by destroying or impairing the peritoneal surface; or,

When, especially, a wound of the peritoneum was present, even one so small as that made by the hypodermic needle.

He also agrees with Leyden that *idiopathic* peritonitis can only occur when the pyogenic bacteria have implanted themselves *somewhere* in the body, but he insists further that there must exist beside either an injury of that membrane or a stagnant collection of fluid within its reduplications beyond its power of absorption.

Since "taking cold" is so often alleged as cause of non-traumatic peritonitis Grawitz tested the effects of cold by shaving and poulticing the abdomens of animals, and then suddenly exposing them to a low degree of temperature; nevertheless, for the most part they recovered without showing ill-effects. By these and other even more crucial tests he concludes that exposure to cold may be an accessory cause, but cannot be the true explanation of idiopathic peritonitis. He explains the frequency of this complication of menstruation by the break in the peritoneal membrane due to rupture of the Graafian follicle and the implantation of bacteria, and reminds us that these bacteria may come from an inflamed tonsil as well as from the uterine surface.

He adduces also the frequent evidence, as shown by autopsy, of perforation of the hollow viscera, and the possibility of recovery therefrom, and shows that the danger depends upon three factors;—the quality of the extravasated fluid, its quantity, and the character of the perforating process. Thus, rupture of the bladder should be considered to have a better prognosis provided a laparotomy be made before absorption of urine has gone too far. Many deaths after rupture or perforation are due purely to shock. He also calls attention to several deaths after paracentesis abdominis in order to emphasize the necessity of antiseptic precautions even in tapping, since the presence of fluid and impaired absorptive power increase the danger of infection.

In many cases of strangulation or obstruction we have an *anatomical* peritonitis wlthout decomposition or suppuration, and yet there is excessive danger of septic peritonitis if antiseptic precautions be not carefully observed during operation. The peritonitis due to the bacilli of tubercle in no wise differs from that caused by pyogenic organisms; as he shows by reporting a case in which the ascites due to cirrhosis was the predisposing cause.

The intelligent reader of Grawitz's most meritorious paper will not fail to draw from it many conclusions of extreme value, whether he be surgeon or general practitioner.

THE PINEAL EYE.

During the past two years, investigations carried on separately by Henri de Graaf and Baldwin Spencer have considerably increased our knowledge concerning the little understood pineal gland. The information was obtained by means of researches upon certain lizards and batrachia. It has been known for some time that among various lizards there is placed on the summit of the head, behind the eyes, an epidermic scale, differing from the other scales of the body and covering an organ of some sort. Also that corresponding to this structure is an opening between the parietal bones, known as the parietal foramen, and that a large parietal foramen exists in the skulls of the extinct ichthyosaurus and plesiosaurus, and the group labyrinthodonta.

Researches upon the remarkable New Zealand lizard, sphenodon, have shown that the organ lying under the peculiar median scale and in the parietal foramen has the structure of an eye. But it resembles the invertebrate rather than the vertebrate eye. The rudimentary eye is called the "pineal eye"; it connects by means of a nerve called the "pineal nerve" with the epiphysis or pineal gland. Investigation has shown that the pineal eye is functional in no living animal, and it occurs in a great variety of conditions, particularly among the batrachia. Either the retina may be imperfectly developed, the cornea nearly or entirely absent, the whole organ may lie within the cranium and the parietal foramen be closed, or even its connection with the brain may be wanting. Though the pineal eye is rudimentary among living animals, it seems probable that it may have been functional in their more or less remote ancestors, which supposition its resemblance to the invertebrate eye would support. It is interesting to note the large size of the parietal foramen in the labyrinthodonts, which are said to have formerly represented the amphibia, as that would indicate a high development of the epiphysis and the pineal eye. So large a foramen occurs in the cranium of ichthyosaurus, and of plesiosaurus, that it seems probable that the pineal eye was used during life. It is uncertain whether the pineal gland in the mammalia corresponds to the epiphysis alone, or to the nerve and eye, as well, of the lower animals. A paper containing a full account of Spencer's researches was published recently in the *Quarterly Journal of Microscopical Science.*

THE ANCIENT ALEXANDRIAN SCHOOL OF ANATOMY.

The Alexandrian Library, though it long since was destroyed, must ever rank as a most remarkable collection. Its chief benefactor, Ptolemy Soter, not content with merely collecting the literary treasures of the world, gathered in the city of Alexandria the most learned men of his day, and, giving them residences near the library, maintained them there. Some were charged with cataloguing its treasures, while others engaged in such investigations as became their various abilities or tastes. On certain days they held reunions which the king frequently attended. Among those thus honored were two celebrated physicians of antiquity, Herophilus and Erasistratus, the latter a grandson of Aristotle. So great renown did these men, with others, confer upon the city and its teachings, that in the time of Galen it was enough to have studied there, or even to have resided there, to obtain a great reputation.

The reputation of this Græco-Egyptian medical school was due, to be sure, to a number of causes, foremost among which in all probability was the permission accorded to its founders to dissect human corpses. This must have imparted an extraordinary impulse to the exact medical sciences and was of inestimable value. Indeed, it was said, that the authorities did more than deliver the *corpses* of criminals for dissection; it has been charged that the bodies of such as were condemned to death were delivered before death, but this is probably an exaggeration. Even royalty used at times to participate in disssection, partly actuated by an actual zeal for knowledge, partly that by example they might lessen the odium to which, at that time, according to Pliny, physicians were exposed by reason of their anatomical research.

But this happy state of affairs did not long continue; even in the city of its origin it was changed by the end of the second century. Original investigation was supplemented by the subtle discussions which were so striking a feature of the dark ages. Rome soon dominated Egypt and the light of the Orient was extinguished. The Romans would shed blood freely in the amphitheater, but they regarded as profanation the contact with a corpse. Julius Cæsar burned the great collection of books and museum treasures, and sore disaster fell upon the Alexandrian Institute. Its prestige gone, its collections destroyed, its savants frightened away, its anatomical facilities made futile by change of opinion and of rulers, it dwindled into an insignificance from which it has only lately emerged.

It got brief respite through the enlightened zeal of Queen Cleopatra, who though beauteous, frail and criminal, was yet a lover of learning and learned men. She obtained from her lover Mark Antony the transportation to Alexandria of the extensive library of Pergamos. But the "atrocious and imbecile Caracalla" murdered most of the habitants of the city, suppressed all public discussions, and took from the learned pensioners of the old museum the privilege of living together on royal bounty and all their other privileges.

This second Alexandrian Library was spared by this Roman monster only to be delivered to the flames in A. D. 641, when the Saracens conquered Egypt and when its 500,000 volumes were burned by order of Omar the Second. "These books," says the historian Abulpharage, "served to heat, for six months, the public baths, which numbered nearly four thousand."

For centuries no progress was made in anatomy. Galen had been *the master* and it was deemed next to madness to dispute him. That which *he* had learned in Alexandria, it was held, was indisputable, and the weight of his authority, which none dared dispute, checked all advance. Not until men emancipated themselves from the shackles of his influence did the physicians of the middle ages enjoy their *renaissance.*

THE fraternity of neurologists, as indeed the whole American profession, have sustained an irreparable loss in the death of Dr. J. S. Jewell, of Chicago, who was one of the most remarkable men that the Western States have ever produced. Born and reared in a log cabin, self-taught in his earlier years, he has recounted to the writer many times how, when a boy, after working hard all day, he would at the close of the day bring in enough logs to kindle a large fire on the hearth, and then lie down and study for hours by the light they gave forth. The same fondness for study characterized his whole life. He learned a new language, sufficiently to be able to read it, every six months. He read every language which has a literature, and several of them he spoke fluently.

Early in his medical career he became a bibliophile, and as his means permitted he slowly amassed the finest neurological library in this country, if not in the world. His memory was singularly extensive, and he probably made better use of his thousands of volumes than could any of his contemporaries. He was in fact a living encyclopædia, and a constant marvel to his associates and friends.

As a lecturer and teacher, first of anatomy and then of neurology, in the Chicago Medical College, he was a model both of accuracy and fluency. As the originator, and for some years the editor and proprietor, of the *Journal of Nervous and Mental Disease*, he brought to bear upon his literary work a wealth of learning which appeared —to those who knew him best—positively phenomenal.

As time went on he became, if possible, more indefatigable in his work, and finally his system broke down under its long-continued strain. For a time he rallied, and worked with somewhat of his old time vigor, and then succumbed, to die April 18, at the age of fifty.

To the writer, who knew him well, he was a continual object of wonder and of admiration. No more thoroughly self-made man ever lived; from the Illinois backwoods to an enormous metropolitan consulting practice is a step which no one ever took before him, and which probably no one ever can take as he did. In many respects we shall not see his like again. His life had its lessons for every young man, and its records merit the fullest publicity which can be given them.

* * *

WITHIN the month past the local profession have been called upon to mourn the loss of one of its oldest and most esteemed members, DR. WILLIAM RING. He was a member of the first class that graduated at the Buffalo Medical College, over forty years ago, and has ever since practised in this city. Here by the ability which he brought to bear upon his cases, and by the many estimable traits of a noble character, he acquired not only an extensive practice and a fame which his juniors may envy and strive to rival, but a place in the hearts and memories of all who knew him. His loss will be deeply felt by a very large circle of patients and friends.

As was becoming, a special meeting of of the Erie County Medical Society was called at which most of those present expressed sentiments fitting the occasion, and at which the following resolutions were passed:

> When death removes from our companionship such a man as our professional and well beloved brother, Dr. Ring, it somewhat assuages our grief at the sad loss to be privileged to pay tribute, however imperfect, as we do now, to his worth and memory.

We feel devoutly thankful for the Providence that has favored us and this community by prolonging his beneficent life for so long. While entirely competent for and largely blessed with the favor and appreciation of the well-to-do and prosperous, we feel that his excellent record is well deserving a place on his monument, and that the key note to his character is his own creed in the past: That he preferred to serve the poor because of the assured compensation, "God being the paymaster." Your committee can but covet the grace to be enabled to adopt for themselves this heaven-inspired, Christ-like sentiment.

* * *

At the Annual Meeting of the Texas State Medical Society in April, 1886, the Special Committee on Surgery submitted a report, which has been printed in quarto form, separate from the other transactions of the society. It comprises seventy-five pages of closely printed tables, from which, as the reporter justly says, "no surgeon, however transcendent his talent, however extended his practice, can fail to derive useful suggestions, practical hints, from the country doctors of Texas." It comprises, so far as was practicable, a complete tabular report of all the surgical operations performed within the State, up to date of its preparation; and it goes far to make good his claim that the surgeons of Texas, county doctors though they be, without academic honors and titles, are second to none in the variety, boldness and success of their operations, in their skill and fertility of resource, and in self-reliance. The report covers 4,293 operations.

Such a report has never before been submitted to any State society, and we hardly know which to congratulate most, the association to which it was presented, or Dr. Geo. Cupples, of San Antonio, who was most instrumental in its preparation.

* * *

The Annual Meeting of the Buffalo Medical and Surgical Association was very well attended, and a gratifying interest in the meetings of the ensuing year was expressed by all. A board of officers was elected, who will spare no pains to provide interesting papers for each meeting. That the future of the society may be all that its friends desire it to be, it is necessary that the zeal of its members continue unabated. There is every reason to hope that it may soon find its home in the Buffalo Library Building; in which case it will have a meeting place not surpassed by that of any scientific body in this country.

PARKE, DAVIS & CO., have sent a handsome large lithographic portrait of Dr. Robert Koch, of the Berlin Imperial Health Board, which, they announce, they will send *gratis* to all who may desire it.

* * *

The Journal of Dietetics is a new Journal, published in Cleveland, Ohio, appearing monthly, and devoted, as its title implies, to the physiology and pathology of digestion and nutrition, and the relations of regimen to practical medicine. Jugding from its first issue it will prove itself worthy of the patronage which its low price —half a dollar a year—will attract.

Correspondence.

BUFFALO, April 10, 1887.

EDITOR MEDICAL PRESS:

Dear Sir—Within a few days past this fair city of ours has been flooded with circulars of an "M. M. M." mixture prepared by a certain regularly graduated physician, which is heralded as a certain cure "*for diphtheria, membranous croup, scarlet fever and all forms of sore throat.*" In order that there may be no mistake, this is, in the most barefaced manner possible, described as "*the only remedy with which to successfully combat these diseases.*" The remedy is supplied with a trade-mark, so that the stamp of commercial venality is not wanting.

It is evident, Mr. Editor, that THE MEDICAL PRESS does not care to engage in controversy, yet to stamp such an unprofessional and thoroughly quackish circular as an outrage, it seems to me, would not be swerving from the policy which your journal has so far successfully pursued. At all events, you may feel certain, sir, that it has created an impression upon the professional community of this city which neither the well-known integrity of the transgressor's father nor his hitherto esteemed love of the ethical proprieties can efface. What this honored father can have to offer in explanation of his son's conduct, and what action his own colleagues may take to purge themselves of the contempt aroused by this singularly disreputable circular by one of their number, with its list of references, are matters concerning which we await developments with a certain interest.

In the meantime I trust you may not lose the present opportunity to rebuke a gross ethical crime. MEDICUS.

[If our correspondent had not already branded this act and circular to which he alludes in no uncertain terms, and yet without undue severity of epithet, we might have felt it our duty to express the abhorrence with which all reputable physicians view such exhibitions not only of bad taste but of questionable honesty; since to advertise *any* drug or combination of drugs as *the only remedy* for a disease, still worse, for several diseases, reflects either on the ability or the integrity of the advertiser. Having made these comments here, we are spared the necessity of having to extend them upon an editorial page.—ED.]

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, April 5, 1887.

Reported by Chas. G. Steele, M. D.

Dr. W. W. Potter presided. Dr. Charles G. Steele was elected a member of the association.

Dr. Lucien Howe gave a short talk on the methods of keeping records of cases. It takes time, hard work and patience to keep records correctly. But we gain exactness in diagnosis, thus benefiting ourselves immensely. We are not liable to confuse cases, and after we have a great many cases recorded, they tell us what our past experience has been. Dr. Howe exhibited his methods of keeping case records, and showed some interesting blanks prepared for eye patients.

The matter was discussed by Drs. Hartwig, Grove, Coakley and Barker.

Dr. Elmer E. Starr showed the apparatus used in examining the interior of the eye, and described the process. He showed two photographs of the interior of the eye, taken by himself.

After Dr. Starr had finished, Dr. Dagenais moved that a committee, to be called the building committee, be appointed to select a site and perfect plans for the erection of a medical hall or home for the medical profession of the city. The motion was carried.

The election of officers for the ensuing year resulted as follows:
President—Dr. J. B. Coakley.
Vice-President—Dr. P. W. Van Peyma.
Secretary—Dr. Charles G. Steele.
Treasurer—Dr. F. E. L. Brecht.
Librarian—Dr. Lucien Howe.

The chair appointed as a committee to select the building committee, Drs. De Lancey Rochester, F. S. Crego and H. R. Hopkins.

After extending a vote of thanks to the out-going board of officers, the association adjourned.

Book Reviews.

A HAND-BOOK OF MATERIA MEDICA, PHARMACY AND THERAPEUTICS. By Samuel O. Potter, M. D., Professor of Theory and Practice of Medicine in the Cooper Medical College, San Francisco, etc. Philadelphia: P. Blakiston, Son & Co. Buffalo: Peter Paul & Bro.

The appearance of a new manual of materia medica and therapeutics is no unusual event during the past three or four years. That now considered is from the hand of one best known to the profession as the author of the less pretentious work, "A Quiz Compend of Materia Medica."

In the "manual" before us the chief consideration is not so much the amount of new material contained as the method of its arrangement, as corresponding with modern and advanced methods of teaching, and as following the direction of medical progress.

The various agents of the materia medica, in alphabetical order, are discussed as regards their origin, chemical and other characteristics, as well as their physiological relations; and a classification, based upon the latter, adopted, as has been the effort of authors recently. If any criticism were suggested here, it would be that this portion of the work might have been considerably extended, and the part devoted to "special therapeutics" correspondingly abridged.

The section on "Prescription-writing" is clear and well arranged. One of the most valuable parts of the work is that devoted to "Pharmacy," a topic too largely neglected by students and practitioners. The "Appendix" contains several subjects in epitome, which are important and suggestive. The whole is well indexed, an indispensable requisite in a "hand-book."

As a whole, the work should find a place on the table of the junior practitioner and prove a serviceable companion to the medical student.

E. V. S.

A Treatise on the Diseases of Women. By Dr. F. Winckel, Professor of Gynæcology and Director of the Royal University Clinic for Women, in Munich. Translated by Dr. J. H. Williamson, under the supervision of, and with an introduction by Theophilus Parvin, M. D. 700 pages. Philadelphia: P. Blakiston & Co. Buffalo: Peter Paul & Bro.

The name of Dr. Winckel is not new to American readers. Many references to his writings scattered through the recent literature of obstetrics and gynæcology, as well as his "Pathology and Treatment of Children," translated by Dr. J. R. Chadwick, have made his name familiar on this side of the Atlantic. His recent election to the presidency of the German Gynæcological Society attests the esteem in which he is held at home.

It is but a year since the work appeared in Germany; so that no patchwork of editorial addenda is necessary to bring it up to the present status of gynæcology. One is impressed by the wise and judicious conservatism which characterizes this work. There is, moreover, nothing of the dogmatism often seen in the productions of narrower minds. He deprecates the ease with which gynæcologists succeed in finding the disease they are looking for, and denounces in no measured terms the craze for castration. Diseases belonging to the puerperal state are very properly excluded. But a large number of diseases not usually met with in works on gynæcology are described. The classification is logical and systematic. The prominence given to the pathological anatomy of the various affections is a marked and valuable feature. It is gratifying to us as Americans to observe the recognition given to American specialists. This satisfaction will scarcely be lessened by his speaking of our Dr. Clifton E. Wing as Dr. Clifton-Wing.

The illustrations are numerous and mostly original. Many are lacking in clearness, as from worn or badly engraved plates. The names of parts are in many cases printed in German the plates of the German edition being used for the translation. This is a trifle awkward, but as the names are rendered into English in the reference description under the cuts, no ambiguity is likely to arise.

Among the many chapters which are worthy of commendation, those on neoplasms of the organs are deserving of special mention. That on displacements is of equal interest, but does not differ materially from the English works. We notice that Winckel does not approve of Alexander's operation, and predicts that it will soon become obsolete, as it merely substitutes one deformity for another.

He very properly devotes forty pages to diseases of the breasts, which are usually ignored by writers on gynæcology.

It is by far the most full and complete work on the subject that we have seen in so small a compass, or in English in any shape.

To students, general practitioners and specialists alike, this truly great work cannot fail to commend itself.

A TEXT-BOOK ON SURGERY—GENERAL, OPERATIVE AND MECHANICAL. By John A. Wyeth, M. D. Pp. 777. New York: D. Appleton & Co. 1887.

An entirely new book by an American author whose previous writings, confined mostly to the surgical anatomy of the vascular system, have won him not only the encomiums but the prizes of several learned societies. Although the book opens without a preface, yet its scope is made sufficiently clear by perusal. Inasmuch as the author has, evidently, purposely avoided the almost limitless field of surgical pathology he can scarcely be criticized, except as regards his judgment, for making only the barest allusion to the results of modern research in this line.

The strong points of the work stand out very prominently, and its defects are mainly those of omission. Thus, he has neglected all reference to Thiersch's method of transplantations for healing large skin defects—a method which would give much better results than any he describes. His chapter on amputations is excellent, an important feature being the illustrations of transverse sections; here, however, we note no allusion to Mikulicz's amputation of the heel, one just as valuable as some that he mentions. The chapter on arteritis is full, and that on aneurisms most entertaining. The operative surgery of the arteries is given *con amore*, though in describing the ligation of the innominate he does not mention Bardenheuer's method, which, to our mind, will be that of the future. Ostitis and periostitis receive only passing mention, not commensurate with their importance. The treatment of fractures and dislocations is quite meager, though surely they come under the head of the mechanical, The chapter on exsections is excellent, and that on plastics quite satisfactory ; it is evident that the author has diligently studied Szymanowski's work to advantage.

The modern radical cure of hernia is scarcely considered; the excision of hemorrhoids receives no mention, neither does cystotomy for intractable cystitis. One would expect a text-book so devoted to the operative part of surgery to mention Robson's osteoplastic transplantation for radical cure of spina bifida, as also to speak of the operation of nerve stretching, of which there is no description. The section on tumors is very scanty and unsatisfactory.

These are defects, however, which can easily be subsequently remedied. Of the work as a whole we can speak only in terms of praise. We see nothing to contradict or dispute; we only wish the author had used a smaller type and inserted more material.

In many of the plates colors have been used to advantage. The illustrations number nearly eight hundred, and all are excellent, a commendable number being original. The paper is beautiful, the type large, and the whole a credit alike to author and publisher.

THE SCIENCE AND ART OF OBSTETRICS. By Theophilus Parvin, M. D., LL. D. Illustrated with two hundred and fourteen wood-cuts and a colored plate. Pp. 701. Lea Brothers & Co., Philadelphia. 1886.

In the long list of works on obstetrics Dr. Parvin's book will easily take a place among the very best. On each topic discussed it is concise, yet full and clear to a remarkable degree. No subject necessary to a complete presentation of the science and art of midwifery has been slighted or abridged to make room for more exhaustive treatment of favorite topics. While presenting all that is essential to an accurate knowledge of the theories of others, the author does not hesitate to express his agreement or dissent in no uncertain language. That which is mainly theoretical is discussed fairly. Even Professor Wilson's table of fœtal pulse-rate as diagnostic of sex is deemed worthy of mention, although in a foot-note.

Always hospitable to the veiws of others, he nevertheless frequently acknowledges—sometimes even when inclined to belief—

that thus far the evidence is insufficient and that we must wait for further investigation.

The chapter on menstruation and ovulation throws no new light on the relation existing between these allied and usually associated phenomena, but is an admirable summary of the results of recent investigations, and contains about all that is now known concerning these two functions.

The treatment of fœtal development is perhaps somewhat too brief for a full presentation of so important a matter, yet it loses nothing in clearness from its condensation.

The author appears at his best, however, in the discussion of the more practical aspects of his subject. There his experience of a third of a century enables him to speak with authority; and his twenty years of teaching has evidently taught him the art of putting things.

The chapters on pathology and operative obstetrics embrace the latest researches in these directions.

Conservative to a degree, he is a safe teacher. He recognizes to its full extent the value and importance of antisepsis, but justly regards some of its more recent applications in midwifery as futile and fussy refinements.

Of the Cæsarean operation and its substitutes the treatment is satisfactorily succinct and terse. The Porro operation and its modifications by Müller and Veit are fully discussed. It seems, however, somewhat premature to condemn the Veit modification without further trial.

Measurements are given both in metric and common terms. This recognition of the claims of a system destined to become universal is timely. The student is aided by having the two in juxtaposition, while fogyism is not offended by the omission of English equivalents.

An admirable feature of the work is the attention given to abdominal palpation. The cuts illustrating this method of examination may be of service to the novice, but it is not easy to see in just what way. Still, if they serve to attract attention to the procedure it is sufficient reason for their existence. In the main, the illustrations are well executed and used judiciously in explaining the text. Most of them are old acquaintances, some are not so familiar, and not a few are new.

For a first edition, it is remarkably free from *errata.* Most of those observed are readily corrected by the intelligent reader. But few could materially mislead the student.

We know of no better text-book for students; and practitioners will find it valuable as embodying the very latest advances in obstetrics both as a science and as an art. J. W. K.

THE PRINCIPLES AND PRACTICE OF OPERATIVE SURGERY. By Stephen Smith, A. M., M. D. New and thoroughly revised edition. Pp. 877; with 1005 illustrations. Philadelphia: Lea Bros. & Co. 1887.

Although modestly styled a second edition, this is virtually the ninth, it being the second revised one since its first appearance. An idea of the added material may be gained when the number of pages is noticed, it being the larger by nearly three hundred pages. Even since 1879, surgery has changed so much as to well deserve the epithet "new." Almost everything which has helped to bring about this change has been incorporated. One can scarcely think of any operation of the present day, however minute, which he can not find here described.

Indeed the work is much more than a mere treatise on operations; it is made, by a judicious comprehensiveness, to include the broad general principles upon which operations should be based. Hence we find the opening chapter devoted to the civil obligations of the surgeon, followed by those on antiseptics, general preparations for operations, anæsthetics, emergencies, dressing materials, bandage technique, etc. Considerations of this kind naturally lead the author on to the brink of the depths of surgical pathology, which he avoids by a sort of *tour de force.* Speaking as an operator rather than as an experimental pathologist, he, not strangely, speaks here with a little less certitude than circumstances justify. Even here there is little or nothing to controvert.

When we turn to a description of the mechanical part of surgery we are not disappointed. A number of pages concerning fracture and dislocation find the place here which they are denied in most similar works. They are of value because of the author's immense experience.

If one were disposed to be captious one might here and there point out some method or some procedure conspicuous by its absence; nevertheless, such omissions would only concern the expert whose library and reading would atone for them.

Altogether, we esteem this the best, as it is the most comprehensive, book of its kind in our language. Many of the illustrations were made for it, and the paper and type are pleasant to the eye. Dr. Smith has written that which reflects immense credit, not only upon himself but upon the American profession, and it will be many years before its superior will appear.

QUIZ COMPENDS:
SURGERY—By Orville Horwitz, M. D. 3d. Ed.
OBSTETRICS—By H. G. Landis, M. D. 3d Ed.
A COMPEND OF ELECTRICITY—By C. F. Mason, M. D.
Philadelphia: P. Blakiston, Son & Co. 1887. Buffalo: Peter Paul & Bro.

Two of these little volumes appear in their third edition; the third is new. The former appear in a greatly improved though not much enlarged form. Although but a short time has elapsed since their first appearance they have had that which they most needed, a thorough and discerning revision in the light of recent advances, and they may now be relied upon as fully and fairly representing the branches of which they respectively treat.

Mason's little brief concering Electricity is a terse exposition of the principles of electro-diagnosis and electro-therapeutics which can be commended to students and beginners.

THE DETERMINATION OF THE NECESSITY FOR WEARING GLASSES. By D. B. St. John Roosa, M. D.
GRANULAR LIDS AND CONTAGIOUS OPHTHALMIA. By W. F. Mittendorf, M. D. Detroit: Geo. S. Davis. 1887.

These two volumes of The Physician's Leisure Library are by two well known New York specialists, each of whom speaks with authority, and each of whom has prepared a very readable and valuable monograph upon his respective subject. There are no topics in ophthalmic surgery upon which general practitioners more need general information than these two, and there probably are no writers better prepared to make a reasonably popular yet scientific exposition of the same than the gentlemen whose names appear on the title pages. The little books are thoroughly practical, are beaufully printed, and are sold for the trifling sum of twenty-five cents each.

DISEASES OF THE JOINTS. By Howard Marsh, F. R. C. S. 12mo. Pp. 461. Philadelphia: Lea Bros. & Co. 1886.

This excellent little work is one of the series of clinical manuals republished by this well-known Philadelphia house, and is one of no small value. Its author is already most favorably known among London surgeons for a great deal of original work in this department of surgery, and he has succeeded in condensing a most valuable lot of information into small compass. His chapter on Charcot's disease is of itself worth the price of the volume.

To be sure, he still adheres to the term "scrofulous" joint disease, and seems to regard struma as an entity, still he is much more liberal than the majority of his countrymen, and includes tuberculosis among the varieties of scrofula. How tenaciously our British brethren cling to old ideas in this matter!

His chapter on internal derangements of joints makes most entertaining reading, and those on congenital dislocation of the hip (so-called), and on nervous mimicry are equally valuable. The last nine chapters are devoted, one to each of the more important joints and the peculiarities which mark the various diseases in different articulations.

Altogether, we have seldom seen a book of its size which appeared to have so much of *meat* in so little *shell* as does this. The whole series, by the way, is both cheap and of great value, and this, by no means the least important, is as well illustrated as the others.

BOOKS RECEIVED.

From Geo. S. Davis, Detroit:
Pregnancy, Parturition and the Puerperal State: P. F. MUNDÉ.
From Lea Bros. & Co., Philadelphia:
Medical Electricity, 3d ed.: ROBERTS BARTHOLOW.
Hand-book of Treatment, 3d ed.: J. M. FOTHERGILL.
Impotence in the Male, 3d ed.: S. W. GROSS.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge*. Such notices should be received by the fifteenth of each month.

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To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

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A YEAR'S WORK IN THE CENTRAL NEW YORK HOSPITAL FOR WOMEN.

By Ely Van de Warker, M. D.
Syracuse, N. Y.

The following report of the hospital is presented, not alone for the interest that nearly always attends operative gynecology, but for the reason that the reports of special hospitals, large and small, are valuable as an exposition of work done under common conditions and therefore valuable as a basis for comparison; but it is of further interest as illustrating some peculiarities of practice, which viewed in connection with the results, are of value as an attempt to give precision to methods concerning which there are differences of opinion. It is with reference to this latter point of view that the following cases are analyzed.

The class of cases to which the most common interest attaches is that of laceration of the cervix uteri. It is also in relation to this group that the practice of the operator differs most widely from that of the originator of the operation for its repair as well as that of the majority of those who have followed his example. Many years have passed since I expressed the opinion that the inveterate catarrh which is such a universal attendant of cervical rents is an outcome of the injury, and can only be removed permanently by repair. It is true that by long continued applications of alteratives and local stimulants and vaginal irrigations the glandular hypertrophy and the erosion may be abated to such an extent that for a time the catarrh and its attending condition will be relieved. If this were the end of it no possible objection could be raised against it. But my experience, both in my own cases and those which I have seen from the practice of others, has taught me that such a result is rarely reached.

There exists in every cervix injured to a surgical extent, an inexhaustible source of irritation that can not be removed without repair. The series of cases operated on in the hospital will be first studied with reference to the extent and rapidity with which the catarrhal condition was relieved. This can be measured with great certainty for the reason that nothing except repair was undertaken for its cure. Our experiment then is uncomplicated by anything that will vitiate the results. The cases are studied to better advantage in a tabular statement than any other.

In the following table the laceration is regarded as the initial lesion, and the degree by the number of sutures necessary to complete the repair. This seems to be the only method of securing a comparative measure of the injury. I do not wish to be understood, however, as claiming that the extent of secondary lesion is in any degree dependent on the extent of the rent. That we know is to no extent true. What I do wish to prove by it is, that the primary lesion was of such an extent as to imperatively demand repair as a method of treatment. This, in view of the loose manner in which the operation is resorted to, seems to be, in connection with the purpose to which I apply it, a very proper precaution. The extent o which the glandular and secretory lesion was corrected will be measured by the extent to which, after the operation, the more active evidences were removed, and it must be understood without other treatment as a rule. This, to my mind, seems to be as fair an estimate of value as can be given to such an uncertain quantity. Granting these conditions, we will now examine the table:

TABLE I.—TRACHELORRHAPHY AS A CURE FOR CERVICAL CATARRH.

NO.	NO. OF SUTURES.		CONDITION OF UTERUS AND FLAPS.	DURATION OF INJURY: YEARS.	RESULTS.
	R.	L.			
1	2	3	Erosion, eversion, hypertrophy and induration, catarrh not marked.	8	Unknown.
2	3	3	Eversion, catarrh profuse.	3	Catarrh cured.
3	0	3	Hypertrophy. induration, catarrh not profuse.	5	Induration relieved; catarrh a trace.
4	3	2	Retroversion, hypertrophy, fixation.	10	Hypertrophy reduced, catarrh cured, mobility improved.
5	3	3	Eversion, erosion, catarrh profuse.	2	Catarrh a trace,gain in nutrition.
6	3	4	Retroversion, erosion, eversion, catarrh profuse.	6	Catarrh reduced to a trace.
7	1	3	Erosion, catarrh slight.	4	Condition unchanged.
8	3	3	Retroverted, hypertrophied, catarrh profuse.	3	Catarrh reduced to a trace.
9	2	3	Hypertrophied, indurated, catarrh slight.	5	Hypertrophy reduced. Catarrh a trace. Subjective symptoms unchanged 6 mo. after.
10	2	2	Erosion, catarrh profuse.	1	Catarrh nearly nil.
*11	2	1	Hypertrophy, metorrhagia, retroversion, erosion, catarrh.	3	Hypertrophy reduced, metrorrhagia cured, catarrh a trace.
12	3	3	Catarrh, erosion.	1½	Catarrh unchanged.
13	3	3	Eversion, erosion, profuse catarrh, metrorrhagia.	2	Hem. cured, catarrh a trace.
14	3	2	Hypertrophy, catarrh not profuse.	3	Hypertrophy reduced, catarrh unchanged.
15	0	3	Catarrh, erosion.	4	Catarrh lessened.
16	3	2	Induration, hypertrophy, uterine fixation, menorrhagia, catarrh not profuse.	8	Menorrhagia cured, induration and hypertrophy greatly reduced, in 3 months uterine mobility restored.
17			Erosion, retroversion, hypertrophy, catarrh profuse.	5	3 sutures posterior. Catarrh cured.
18	1	3	Fixation, hypertrophy, induration, catarrh not severe.	3	Slow amendment.
19	3	3	Retroversion, erosion, catarrh.	2	Results not known.
20	2	2	Erosion, catarrh.	3	Catarrh cured.
21		3	Erosion, catarrh.	1	Catarrh a trace.
22	1	3	Erosion, catarrh.	4	No improvement while in hospital.
23	2	3	Hypertrophy, retroversion, erosion, eversion.	10	Hypertrophy reduced, great improvement in nutrition and reflex symptoms.
24	3	2	Fixation, hypertrophy, induration.	9	Hypertrophy and induration reduced, mobility nearly restored before leaving hospital by pelvic massage.
25	2	2	Retroversion, erosion, catarrh.	3	Catarrh cured.
26	3	3	Erosion, catarrh profuse.	6	No note made of results.
27	2	3	Hypertrophy, erosion, catarrh.	5	Catarrh cured.

*In No. 11, two sutures were posterior and one left lateral.

It will be observed that several of the cases were complicated by uterine fixation, the result of antecedent pelvic peri-uterine inflammation. This complication is so generally regarded as a contra-indication for the operation that it requires a separate analysis.

The following conditions would, in my opinion, render trachelorrhaphy safe in the presence of uterine adhesions. In the first place they must be chronic in the most ample meaning of the word. Of equal importance is the absence of high temperature as a long and interrupted part of the history. Pelvic abscess ought, if a feature of the case, to be a remote event. There ought also to be an absence of circumscribed indurations or phlegmas. The natural tendency of adhesions, the result of pelvic peritonitis, is to be absorbed. If there be no relapses or retarding forces present in the pelvis to prevent absorption, uterine mobility should be restored in from six months to two years, roughly stated. As a matter of fact we will meet with those cases in which uterine fixation and pelvic tenderness have persisted for many years. It has been my experience to find these associated with cervical rents. The philosophy of the non-absorption is a simple one. We have in the laceration of the cervix a focus of irritation that invites a constant state of pelvic hyperæmia that retards or arrests the vital act of absorption. The results that have followed in the few cases in which I have ignored the universally regarded law of non-interference have justified both my practice and the theory upon which it was based. One of the cases was for nearly two years under my care, and was afterward for eight months in the Woman's Hospital in New York, during which time she was under most active treatment to reduce the adhesions preparatory to a repair of the cervix. She returned at last under my care. I repaired the cervix after considerable hesitation, and at once the pelvic tenderness abated, normal circulation was restored, and the adhesions gradually disappeared. In two months after the operation the woman walked for the first time in over three years. My method of operating may have something to do with the absence of relapsing inflammation following the operation. The operation is done without drawing the uterus down by the use of my needle forceps; in any case, of course, no traction can be made upon the organ when it is situated high and restrained by adhesions, and here the needle forceps is perfectly adapted to the condition. I regard this simply as a preliminary report upon the subject, and shall continue to work upon it as suitable cases present themselves.

TABLE II.—TRACHELORRHAPHY IN UTERINE FIXATION.

NO.	DURATION OF ADHESIONS. YEARS.	HISTORY.	OTHER TREATMENT.	RESULTS.
1	4	Pelvic peritonitis. Two relapses. Retro-uterine adhesions.	Irrigation, pelvic massage, ammo.muriate., pot.chloride.	Pelvic tenderness subdued. Rapid disappearance of adhesions.
2	2	Great pelvic tenderness. Impaired locomotion.	Before operation: irrigation; after, massage, irrigation.	Able to walk and stand before leaving hospital in six weeks.
3	Not known.	P. peritonitis followed by abortion; has had chronic diarrhœa, thickening of vag. vault, not evident above pelvis.	Irrigation; after op. pelvic massage, galvanism.	In three months uterine mobility restored.
4	1	Relapses, retro-uterine adhesions, vag. and ut. hypersensitive.	Irrigation.	Pelvic hyperæmia reduced. Improved mobility.

Our perineal operations have been a subject of great interest to us. It is not very many years ago since I regarded an operation for the restoration of the sphincter ani with great dread. Success was such an uncertain quantity. A failure now would be a great surprise to us. I do not think this has been the result of any "new method." Every gynecologist has such a method in perimorrhophy. We make a flap operation in both the complete and incomplete forms of the injury. A good idea of the orginal form of the flap may be had from Hart & Barbour, *fig. 324.* The flap is not divided at *b* as it is figured, but is left continuous. The sutures are passed from the anal margin upward; and, when the flap is reached the needle is worked through the flap which is thus included. A sufficient number of sutures are thus passed. When the wound is closed the vaginal surface is roofed over, and is sealed against infection from this source as well as from urine. We use a larger number of sutures than is generally directed in the text-books. If there is a rectocele the flap is carried up sufficiently high on the vaginal wall to bring it down. In such cases there may be a redundancy of flap when the wound is closed, which is removed.

Dr. Trenholm, of Montreal, lays claim to this operation as original. This is absurd, as the idea is an old one. No one at this late day would make such a claim except one who has a morbid inclination to "priority." When the sphincter is torn a line of close sutures is placed in the rectum and the sutures through the muscle are passed after Emmet's method. Now comes the chief factor of success. It is a process that is abandoned by most gynecologists, and condemned in the text-books. In operations for repair of the sphincter a counter incision is made through the muscles directly backward, and the internal sphincter is stretched.* A clean cut at a right angle to the line of fibers is sure to heal, and as all strain is taken off the ends of the newly joined muscle they are equally sure to unite. Another advantage is, that there is no accumulation of rectal gas, and no impaction takes place. In incomplete perineorrhophy the sphincter is paralyzed by stretching. Complete rest is thus given to the perineal region. In the latter case the bowels are encouraged to gentle movements daily. If this counter cut is made, it matters little how the sutures are passed or of what material they are made, union between the torn ends of the sphincter muscle is nearly certain, for the simple reason there is no force to pull them asunder. It is a mystery to me why any one should oppose the method.

The first case was a serious and complicated one. In the first place the woman was exceedingly fat, always a troublesome complication in a gynecological operation, and she had been through two previous unsuccessful operations, causing the loss of much valuable tissue. The laceration was complete through the external sphincter; about half an inch above was a recto-vaginal fistula, about three-eighths of an inch in diameter, and covering all from view was a large rectocele. The first step in the operation was to make the counter cut directly backward. This freed the ends of the torn muscle so that they could be easily approximated. The flap was next dissected up laterally, and over the fistula and into the rectocele. The fistula was closed by a line of fine cat-gut sutures, cut short and covered over when the large flap furnished by the rectocele was brought down. The remaining steps of the operation were completed as already detailed. The result was perfect.

Four other cases of complete rupture of the perineum were treated successfully in the hospital for the year. Five cases of incomplete rupture, all associated with laceration of the cervix uteri. Instead of closing the cervical rent in one case the cervix was so greatly elongated with pendulous flats that a circular amputation was made; posterior colporrhaphy was then made, followed by perineorrhaphy. Union was perfect at the seat of each operation.

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* The idea was borrowed from Salmon. He called it his ' back cut," and was very successful in fistulæ in ano.

It is interesting to note that in making double repair operations the only instances of hemorrhage that were observed by us took place. In one the hemorrhage, which occurred on the third day, was checked by iron injection, and in the second the bleeding was more obstinate, repeated astringent irrigations failed, and as it was a week after the operation I thought it better to pack the vagina than to take the work down. Union was complete.

Four cases of intra-uterine growths were treated. Of these three were mucous polypi, and one intra-uterine fibroid. The latter only deserves notice. The subject gave the usual history of menorrhagia, and its removal was urgently demanded. The tumor was the size of a hen's egg, and the cervix was rapidly dilated to a diameter to permit easy removal by dilators after the patient was upon the table. It was done with great ease and but little loss of time. For small intra-uterine growths I do not believe it is necessary to employ any other than rapid dilatation. The use of tents is unsafe and is, I believe, being abandoned, while a method of gradual dilatation by plugs of cotton, which I have noticed going the rounds of the medical journals, is filthy and slow. For digital exploration for several years I have resorted to rapid dilatation, and the method has given perfect satisfaction, and I would advise it in all cases to the exclusion of tents.

The cases of malignant disease of the cervix uteri were unfortunate. The opening of the hospital was a week in advance of its formal opening to admit a case of epithelioma of the cervix in a and the cervix amputated high up. She was securely packed and put to bed in a very low condition. About an hour after she was reported as bleeding. The packing was removed and a couple of bleeding points were secured with difficulty. The hemorrhage was an oozing from broad surfaces, not from pumping vessels, and the difficulty was due to the contraction of the parts caused by the styptic cotton. She was put to bed in a collapsed condition and never rallied. This was our first case in the hospital and our first and only death for the year, and my first death following this operation. It taught me a useful lesson. Never hurry a patient off the table after such an operation on the cervix, trusting to iron and firm packing to prevent hemorrhage. Take time to see that every bleeding point is secured, and it takes time to make sure of this. Sometimes this cannot be done by pressure, by sponge or forceps, but vessels have to be tied. This cannot be done in the usual way by ligature, as sufficient tissue to hold the ligature is not afforded by the dense surface. I use my needle forceps, which was invented for trachelorrhaphy, and by passing the needle from the vaginal surface inward toward the uterine excavation I thread it, and on withdrawing it have a large amount of tissue embraced within the ligature. This sloughs off as the result of packing with zinc chloride.

Case 2 was in a very young woman, 38 years, and although the repair of the uterine excavation after the separation of the slough was fairly prompt, yet her nutrition was never restored, and she died from exhaustion in a few weeks after her return home.

Case 3 was also a young woman at 40. She lived several months with no return of the disease in the pelvis, but she ate less and less, and gradually wasted, dying exhausted in six months.

The fact that it is impossible to arrest epithelioma of the uterine cervix in women before the menopause has led me to divide these subjects into two classes. In women with the tissue changes confined to the cervix after this period the rule is for the cure to be permanent or the disease not to return for many months or years. This has led me to keep within the safe limits of a conservative operation, and not subject the young woman to the extreme hazard of total uterine extirpation.

A remarkable instance of female masturbation was admitted to the hospital. She was 65 years old, married, with several children. She was admitted as a case of pruritus of the vulva. No suspicion was entertained of a refined and distinguished appearing old lady of prominent family and fifteen years past the climacteric. The clitoris was covered with greatly thickened integument, and as large as the penis of a child; the glans was buried deeply in indurated corrugations of whitish integument. The labia minora, indurated and deeply fissured, projected nearly two inches beyond the vulvar commissure. She was mentally morbid, appetite uncertain and physically weak. About two weeks after her admission Miss Dr. Adams, the house surgeon, told me that the nurses refused to make any further local applications, as the patient tried to force their fingers into her vulva, and would at the same time make lascivious motions with her body. Upon this I resolved to amputate the clitoris and nymphæ. This was done and the edges of the incisions brought together by catgut sutures. Upon the right and over the site of the extirpated clitoris several stiff wire sutures were placed, with their twisted ends projecting to prevent her fingering, on the plan of wiring a pig. The row of projecting wires looked formidable, but they proved useless, as on the fourth day the nurse discovered that she was bleeding freely, and an examination showed that she had torn the right nympha open. I lost patience with her and gave her a severe scolding in the presence of her daughter-in-law who was visiting her. My scolding was too much for the poor creature; she broke down and confessed the whole thing. A more humiliating confession I never heard. She began the practice in early girlhood, and continued it all through her married life. She would leave her husband's bed directly after sexual relations, go into the next room and masturbate. Her morning visit to the closet and while undressing at night were times at which her temptation came upon her with peculiar force, and were seldom passed without indulging. During all this time her health and strength continued unimpaired until after the menopause, which was at about fifty, when indulgence was followed by severe prostration. She stated that no change was noticed in the parts until after her fortieth year. We were obliged to put a nurse upon guard day and night until the parts were thoroughly healed. Some months after her return home a letter from a member of her family informed us that she was greatly improved and had nearly given up the habit.

In a group of cases, suffering from what we have got in the habit of terming bedism, we have had very happy results. In the main these are cases which were originally taken down with acute sickness or functional pelvic trouble and through impaired will-power fail to get up. They become overdosed under the delusion that there is some "medicine" for their ills; add to this morbid sympathy and unhygienic surroundings, and we have an array of conditions that will defy the utmost skill. These cases are frequently termed neurasthemia or nerve exhaustion, and are subjected to enforced rest and milk cure. This, so far as our own cases is concerned, is a mistake. These are not cases of nerve-tire, but of will-tire, for which our term "bedism" is a fair equivalent. The first step toward cure is removal from their habitual environment. Then stop all medicine so that the patient's mind may be concentrated on the fact that relief must come from direct physical causes. Between Faradism, bathing, manipulations and palpations and passive limb movements, she is made to do a hard day's work and by night she is tired, as wholesome a sensation as that of hunger, and begins to sleep without her habitual anodyne. Without attracting her attention to the fact she is made to do things which she would have believed impossible, without being made any the worse by it. She has had a very comfortable time of it up to this point, but now her attention is called to the fact that she is really doing a fair day's work, and is all the better for it. She is now taught to walk, not teazed into it, but by some excuse like walking to the bath-room, because she can be treated more thoroughly. Directly she does this, the fact is impressed upon her in full force that she is able to walk, and is made the better by it. Thus step by step her education is carried on until we leave her on the street walking, never driving. There are not two cases, of course, treated alike, but this is a fair outline of the course usually pursued. I give this reference to the few cases we have had of this character, simply to demonstrate that the fashionable treatment by enforced rest and feeding is not the only if even so prompt a method of treating these difficult cases.

The laparatomies made fall into our second year, and will be mentioned in our next report.

THE HUMAN TEETH VIEWED IN THE LIGHT OF EVOLUTION.

BY JULIUS POHLMAN, M. D.
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[Read before the Society of Natural Sciences, February, 1887.]

Are we in danger of becoming toothless as a result of the evolution of the human race? Biologists tell us that the human jaws contain a smaller number of teeth now than they did in times gone by, and this in connection with the increasing deterioration of the teeth of civilized people, as testified by dentists, certainly gives color to the fear expressed above. The first statement made has been explained by the assertion that the evolution of the brute into man was accompanied by a change of his dentition as a natural result of his altered mode of life,—that, of course, cannot concern us now, for we are unable to alter the past, although we can profit by the lessons it teaches, and certainly nobody desires the return of man to a brute stage. The second assertion, however, is of immediate consequence to us,—here we deal with the present as well as with the future, and it therefore deserves the fullest attention; and a thorough discussion of all theories advanced may teach us a useful lesson of how to avoid the prospective evil.

Each one of the different theories advanced to explain why teeth decay so rapidly at our present stage of civilization finds its adherents and finds facts to demonstrate its correctness, while others likewise find facts to prove that that particular theory is unable to explain all. "Too much sugar or candy is eaten," we are told; but experience teaches us that few better dentifrices exist than sugar-cane, and the "ivories" of the slaves working in the sugar plantations are a matter of history. The fact that the sugars and candies eaten to-day are, to a certain extent, adulterated with glucose, or perhaps with other substances more or less injurious to the body, does not change the matter in any way as far as the teeth are concerned; all other things being equal, there seems to be no valid reason why a sugar diet should set up a more rapid or more destructive fermentation in the mouth if minute quantities of it are retained between the teeth, than could be produced by an equal portion of bread; the difference should rather be in favor of the former, as bread particles will lodge far more readily than sugar, which dissolves rapidly and is carried away by the saliva. "You eat too much salt," another theory tells us; and yet where is more salt eaten than among ocean sailors? and they, as a class, know very little, if anything, about tooth-ache. It may be that the prevailing habit of tobacco-chewing among them has something to do with the preservation of their teeth by keeping the mouth in an aseptic condition, but salt is known to possess similar qualities, and if it had any evil effects on the teeth, tobacco could hardly prevent its destructive action. "Bread from the whole wheat flour, such as was made in our mothers' time in the old-fashioned stone mill, contains a certain quantity of mineral salts which your modern white flour has lost during the process of roller milling; hence the latter does not contain the substances necessary for the well-being of the teeth, while the former does; and as everybody eats white flour bread now-a-days, we can easily account for the increasing deterioration of the teeth." Thus runs another theory, and it would have force if we lived on bread alone, but we do not, we eat quantities of other substances besides. Moreover, if a food is capable of furnishing the mineral salts necessary for the maintenance of *all* the bones of our body, it ought to be sufficient to supply an additional few ounces of teeth as well. If decayed teeth and rachitis always went together, then the above assertion might be accepted as fully demonstrated; but as the statistics for bad teeth and for rachitis are entirely out of proportion, this theory will not explain all, although it may find its application under certain conditions. In sections of country where bread from poor white flour forms the bulk of the food to the exclusion of everything else, its influence upon bones and teeth must appear simultaneously; otherwise, all other things being equal, we may as well assert that a food is good enough in quality and quantity to supply the whole body with the material necessary for its growth and maintenance, with the exception of the finger-tips which perish for the want of the proper nourishment. Any such assertion would be looked upon as ridiculous, yet we are supposed to accept a similar statement with regard to our teeth.

"The constant use of the tooth-brush, the most scrupulous cleanliness," is finally the banner around which all rally; but, without saying anything against it, it does seem rather strange that on an average the best teeth are found among those tribes and races who are as yet in blissful ignorance of tooth-brushes. Most of us have seen skulls of savages with the teeth ground down to the gums, but all in prime condition, hard and strong; yet no anthropologist has so far discovered any implement in the mounds and graves of such savages that held even the faintest resemblance to a tooth-brush. Who that has traveled in Germany has not heard of the famous "Schwarzbrot-zaehne" (rye-meal bread teeth), proverbial as a designation for brilliant teeth; but the population of the districts that claim such a distinction consists mostly of a farming population, hard-working and not too well off in this world's goods. They make four out of their five daily meals upon rye-meal bread baked at intervals of from four to six weeks, yet it is very much to be doubted whether one in a hundred is the happy possessor of a tooth-brush or feels any necessity for such an article. But their teeth are beautiful, nevertheless.

Instances of such character could be multiplied, but the above few cases can be considered fair samples to show that as a rule those people who are *least* acquainted with the so-called hygiene of the teeth are the happy possessors of the soundest dentition.

How, then, shall we find our way out of this dilemma of conflicting views? Can only a constant attendance by a skillful dentist check the growing evil of bad teeth and prevent the development of a toothless race of men? Or can we discover some true hygienic law; something that will strengthen the teeth from within out, something that does more than merely polish the surfaces?

If any law in biology is accepted by all modern investigators, it is the law that "*use* determines the form as well as the strength of an organ." And this we find illustrated everywhere and every day. We can develop increased chest capacity as well as general muscular strength by careful and systematic training, while both deteriorate when occupation or position prevents their exercise. Our vision improves or weakens according to the use we make of our eyes; the sense of touch can be trained so that even very minute differences in weight or structure can be detected; a musician can distinguish tones inaudible to the untrained ear,—in fact all the organs of our body, at least those which are under the control of the will, are susceptible of improvement within certain limits by a judicious training, by a *legitimate use*, while they all deteriorate or weaken when condemned to inactivity, to non-use!

And what about our teeth? Nobody will dispute that they are organs developed for the purpose of crushing food; cells specialized to cut or grind substances more or less hard, and why should they be exempt from the law which holds that the "strength of an organ depends upon its use"? Why should we be willing to recognize the law for every other part of our body and refuse to admit its operation in our teeth, organs both useful and ornamental? They are specialized to exert their power upon *hard* substances, and like other organs and organisms they try to adapt themselves to their surroundings; they will gain strength by use and weaken by non-use.

Bearing this in mind we can perhaps arrive a small step nearer to the solution of the question why advancing civilization so apparently increases the number of bad teeth, for although their actual diseases may have existed in prehistoric times as well as they do now, their percentage is certainly largely on the increase. As civilization advances our food is prepared with more and more care; hard substances are softened, tough particles are rejected, and everything is carefully boiled and reduced to a mere pulp or to a pulpy consistency, whereby the legitimate work of our teeth is reduced to the minimum. And what are the consequences? No longer called upon to perform the office of crushing *hard* substances, they soften; they feel that there is no necessity for presenting a dense hard material, because the work, for the accomplishment of which they were specialized, is performed for them by the cook, and the results are "soft teeth," teeth less hard and resistant than those in a normal condition, teeth which now deteriorate and will finally disappear altogether for the want of use.

Such a weakened condition of course does not produce decay, but, like other organs or organisms in a state of poor health, soft teeth are more susceptible to outside injurious influences than those in a normal and vigorous condition, and bacteria, which would be unable to thrive on or among sound healthy teeth, will find a fertile soil in the weakened and softened substance of the enamel and dentine, and thus produce all the various forms and varieties of ills known to modern dentistry.

What are we to do? A preventive medicine would be, "Use the teeth." The eating of sugar-cane as a dentifrice means mastication of the cane; the hard bread eaten by sailors keeps their teeth in good condition because such food means very energetic biting; four meals a day on rye bread presupposes a prolonged use of the organs of mastication, and the brilliant "Schwartzbrot Zaehne" are the immediate results; it is not the friction of the food upon the teeth, for that could as well be supplied by a tooth-brush, but the legitimate use of the organs which determines their strength in all these cases.

Unfortunately, we cannot make people eat hard bread unless they are willing to do so, and as long as we have the conviction that a skillful dentist is able to do all that can be done to preserve our teeth, we will find the majority of men unwilling to attempt any systematic training in that line; but we need not lose courage on that account. Only within recent years have men arrived at the understanding that a certain quantity of physical exercise is necessary for their well-being, and that a well-developed body is capable of withstanding many forms of disease far better than one unused to muscular activity of any kind. In the course of time men can be made to understand that the labor of mastication is equally necessary for the preservation of their teeth; for, after all, hard bread tastes just as good as soft bread as soon as the muscles of mastication have adapted themselves to their legitimate work. It is a matter of common observation that old people with good teeth generally eat bread crusts, but cause and effect are confounded here, for they do not eat crusts because they have good teeth, but they have good teeth because they have eaten hard bread all their life, and thus, by a constant use, have retained their dentition in a normal healthy condition. The foundation for bad teeth is generally laid in early childhood; for numberless mothers and nurses very carefully soften the food or remove the crust from the bread before giving it to the little folks, because it otherwise may "hurt their teeth," and so the child grows up with a set of unused organs in its mouth; and when we have finally succeeded by the creation of artificial conditions in producing weak organs, then we wonder why the poor child has such bad teeth, and why it is so often suffering with toothache, and why the dentist's bill is so high.

Teeth are organs specialized to perform the work of mastication; they are subject to the same laws that govern other organs, and their strength is determined by their use. Understanding this we are obliged to admit that if we ever become a toothless race it will be our own fault; knowing the danger we can avoid it; we can take precautionary measures and teach our children that a certain quantity of training of our masticatory organs is just as necessary as general physical exercise; and if we can make them understand that such a simple course will save them from many physical as well as mental sufferings entailed by numberless aches and diseases, and good looks destroying bad teeth, then we need not fear that the evolution of man will ever result in the production of a toothless race.

NEW USES FOR FEHLING'S SOLUTION.

Jolly (*Moniteur de la Pharm.*) applies Fehling's solution for the discovery of not only glucose, but also peptones, phosphoric and uric acids.

I. Put in a test tube one part of Fehling's solution and ten parts of urine; heat to boiling: (*a*) The solution remains blue—nothing. (*b*) It is amber colored with a flocculent pale yellow precipitate—peptone. (*c*) It is orange colored, and after a few moments an orange colored precipitate—glucose.

II. Take equal parts of solution and urine; heat to boiling: (*a*) The liquid changes color very little; after a few moments the clear liquid remains blue and the precipitate is bluish-gray—small quantities of uric acid. (*b*) The clear liquid is green and the precipitate greenish-gray—excess of uric acid. (*c*) There is only very little precipitate—small quantities of phosphoric acid. (*d*) The precipitate is abundant—much phosphoric acid. (*e*) The liquid turns orange; on standing the clear liquid is brown and the precipitate reddish—glucose.—*Medical Herald.*

IT was a brave man who declined to be vaccinated on the ground that he was not to be cowed by any living man.—*Boston Transcript.*

Translations.

OBSERVATIONS ON THE SURGICAL USE OF LANOLINE PREPARATIONS.

BY DR. C. GÜTERBOCK.
Berlin, Germany.

[Translated by the author's request for THE MEDICAL PRESS, by Ernest Wende, M. D.]

Up to the present time it appears that lanoline has been but little employed in surgical dressings, in spite of the manifold local uses to which it has been subjected since its introduction by Prof. Liebreich.

Having been supplied with a quantity of "lanolinum purissimum" through the kindness of Messrs. Darmstädter & Jaffé, I was able to test its virtues in this direction at my private polyclinic. To be sure, the number of cases in which this substance might be employed is not a very great one, owing to the counter indication of ointments in recent surgery; nevertheless it was thoroughly tested in something like twenty-two cases; in some instances the applications were continued for a long time. It was especially applied to fresh burns of the second and third degrees, to ulcers of the leg and also to wounds complicated with an obstinate medicinal eczema at their periphery such as are produced by a lengthy and continuous use of carbolic acid, iodoform, corrosive sublimate and other antiseptics. The applications of lanoline always consisted of a combination with zinc oxide or iodoform in the proportions of 10:1, spread upon small pieces of cloth or upon gauze, followed by a layer of ordinary cotton batting and held *in situ* by a gauze bandage, the part or wound having been previously well disinfected.

Lanoline compounded with oxide of zinc or iodoform in the proportions of 10:1 has nearly the same consistency as an unguentum molle. From other soft ointments, namely, such as are prepared from vaseline, the lanoline compound is distinguished by the ease with which it can be uniformly spread over very large injured surfaces or portions of skin, therefore rendering it possible to be more economical with an ointment thus prepared than with one having a different vehicle for its base. Thereby it appears that the consistency of an unguentum iodoformi, or an unguentum zinci lanolisatum is but little influenced by temperature. It does not matter whether cold or warm, it can be readily spread over a large surface, and is not so apt to strike to the skin at various points as it is customary for the ordinary ointment to do.

A systematic arrangement of the individual cases is not necessary for judging the results obtained. It will suffice to say, that with the exception of a very rare instance the ointments were well borne. This was universal, consistently with a single, with a frequently repeated, or with a long continued application, and it was certainly well tolerated in those patients where ointments compounded with fat or vaseline had shown themselves to act detrimentally or accomplished but little good. Concerning the curative effects, the best results were achieved in fresh burns, and in the so-called medicinal eczemas; the least promising were in ulcerations of the leg. In most of these patients all former remedies had failed, the ulcers were very large, and were in no way influenced by the care of the sufferer, and even in the ordinary individual they had a tendency to withhold cleanliness. It was only in a single case that the lanoline therapy was not tolerated, and no improvement apparent. Thus under the existing circumstances we are compelled to decide in its favor.

It is also well to state that at times in addition to the application of zinc oxide or iodoform lanoline, necessary baths were employed, and in two cases of granulating wound surfaces, nitrate of silver came into play. Also, in one ulcer of the leg, which was supposed to be of a syphilitic nature, iodide of potassium was given. Yet, in the main, the various results obtained, which frequently were most satisfactory, were due to the local treatment with lanoline. It certainly can be said that in appropriate cases, in ulcerative and necrotic processes, in tender and sensitive localities, lanoline can be advantageously substituted for the usual bases in ointments, and with special regard to the extension of the application, to the thinness with which the ointment may be spread, and in keeping larger wound surfaces free from septic poisoning.

—Prof. Saint Germain, of Paris, for phimosis uses a pair of pointed forceps which he introduces as far as the meatus, and then spreads it until he can pass the gland through the opening. The operation is followed by less irritation than circumcision, and the results seem to be good.

THE CONNECTIVE TISSUE OF THE FEMALE PELVIS AND ITS PATHOLOGICAL CHANGES, WITH ESPECIAL CONSIDERATION OF PARAMETRITIS CHRONICA ATROPHICANS, AND THE ECHINOCOCCUS DISEASE.

BY PROF. W. A. FREUND.

[Translated for THE MEDICAL PRESS by Irving M. Snow, M. D.]

It is impossible in a short review to discuss all of the details of this excellent monograph, and we only briefly allude to the most important point of the treatise. After a masterly description of the normal anatomical relations of the pelvic cellular tissue, the author passes to the consideration of the pathological changes which affect the connective tissue of the pelvis. The treatise is divided into five sections.

I. Tearing and bruising of the pelvic connective tissue. This may occur from the injuries of parturition, by the introduction of instruments of various kinds, viz., from forcible dilatation of a long and rigid cervix, from strong traction upon a cervix imbedded in cicatricial tissue, or in elderly women after enucleation or ecrasement of large submucous myomata. Such injuries may be followed by the formation of thromboses from hemorrhage into the pelvic connective tissue. Various local influences predispose to this condition; varicose veins, local congestion of neurotic origin, more rarely the menstrual congestion, or pernicious anæmia. Thrombi may be produced by piercing a vein in introducing a suture. If the pelvic fascia be not extensively lacerated by the injury, the hemorrhage does not extend through it, but causes an extreme distention of the pelvic wall.

II. Acute inflammation of the pelvic cellular tissue. The milder form of acute parametritis proceeds from an injury to the parturient canal and an infection of the wound. The primary seat of the inflammation is in the tissues around the cervix or vagina, or in the peripheral connective tissue, and its extension is influenced by the location of the injury, and by the vicinity of ligamentous bands or cicatricial tissue. No law has yet been discovered which governs the extension of the inflammatory processes. Usually the simple phlegmon is limited to the region of the true pelvis; when the inflammation passes beyond the true pelvis it is nearly always favored by preexisting inflammatory conditions or remains of former exudation in the vicinity, by tuberculosis and also by caries of the pelvic bones, which bear a close relation to pelvic phlegmons. The disease may be protracted by further injuries of the inflamed or partly healed tissues, and finally by additional septic infection of the infiltrated part.

If the inflammation extend beyond the true pelvis, a serious complication in the form of phlegmasia alba dolens may occur. The author states that the first stage of crural phlebitis is lymph stasis, and next a venous stasis from pressure of the thrombi on the crural veins.

As a result of the contraction of the exudation various sequelæ may ensue, compression of the ureter, adhesion of the ureters to the cervix uteri, displacement and fixation of adjacent parts of the intestinal canal, displacements of the uterus from the acquired immobility of the cervix, and remoter evils, as neuralgias, chronic inflammatory conditions of the uterus, bladder and rectum, disturbances of the blood and lymph circulations in the pelvis, and finally adhesions to the peritoneum.

The second and by far the more malignant form of acute parametritis is the septic phlegmonous variety, which follows septic injuries. It is caused by the entrance of the septic poison into the veins, and presents the clinical picture of pyæmic puerperal fever, or attacks the pelvic cellular tissue as malignant internal puerperal erysipelas; all the surrounding tissues are rapidly involved in the inflammation which has an especial proclivity for the peritoneum.

III. The main part of Freund's treatise is devoted to the discussion of chronic atrophic parametritis, diffuse and circumscribed. The analogy of this process Freund finds in the granular atrophy or cirrhosis of the larger glandular organ. It originates in "the aponeurotic thickening" of the pelvic connective tissue. The disease is not to be considered as a sequel of acute cellulitis, but exists as a disease *sui generis* in two forms,—a diffuse and a circumscribed variety.

(*a*) The circumscribed variety may follow ulceration of the bladder, dysenteric and follicular ulceration of the rectum, and ulcers of the cervix uteri. We may, accordingly, distinguish a paracystitis, a paraproctitis and a chronic atrophic parametritis. The circumscribed variety may be followed by displacement of the uterus; especially laterally, adhesions of the uretus to the cervix, thickening of the pelvic peritoneum, dislocation of the ovaries, thickening of the broad ligament, partial displacement of the bladder, chronic catarrh and induration of the cervix uteri, hyperæmia about the rectum and hemorrhoids, periphlebitis and thrombosis. The differential diagnosis between this form and the chronic pelvic peritonitis of Douglas's *cul de sac* may be difficult. Complete healing may follow the removal of the cause, especially if a normal pregnancy intervene.

(*b*) The diffuse form arises from the pelvic fasciæ which envelope and support the uterus in its whole extent, and especially from the connective tissue which forms the base of the broad ligament, from the tissues lying between Douglas's *cul de sac* and the rectum, and an especial predilection is shown for the left side of the pelvis. In extreme cases, the floor of the pelvis may become atrophied, and the degeneration may further involve the sub-serous tissues of the anterior and posterior abdominal walls and the connective tissue of the mesentery of the colon. Microscopically we find cicatricial hyperplasia of the pelvic cellular tissue, with periphlebitis and perineuritis of the larger ganglia of the pelvis. The ganglion of Frankenhauser is decreased in size, and the intergangliar connective tissue is hyperplastic; the ganglion cells are shrunken and infiltrated with brown pigment, the remains of the neucleus are difficult to discover. In the latter stages of the disease the areolar hyperplasia reaches a much higher degree.

The most important sequelæ of diffuse atrophic parametritis are, venous hyperæmia of the pelvic organs, cystic and rectal catarrh, atrophy of the muscular tissues of these organs, an uneven granular condition of the surface of the uterus from scars and dilated veins, with clouding of the serous covering of the uterus, hyperplasia of the connective tissue in the uterine walls, atrophy of the uterine mucous membrane and of the round ligament, and widening of the inguinac and femoral canals, twisting and stenosis of the Fallopian tubes, hyperplasia of the connective tissue of their walls and atrophy of the mucous membrane, cicatricial atrophy of the ovaries, atrophy of the vaginal walls and narrowing of the vaginal cavity, atrophy of the external genitals, and dilatation of the veins of the anus, urethra and neck of the bladder, and finally, in extreme cases, relaxation of the abdominal walls, atrophy and dilation of the colon, and prolapsus and distortion of the sigmoid flexure of the colon.

The etiological conditions which lead to the diffuse form are sexual excitement, masturbation, too frequent coitus; also, diarrhœa, profuse sweats, catarrhal discharges, hemorrhages, faulty nutrition, mental and physical strain, and, finally, hyperplasia of the genitals and vascular system, and even gonorrhœa and syphilis are mentioned as occasional causes. The local symptoms correspond with the seat of the anatomical changes. The patient is afflicted with pains which radiate from the atrophied places along the nates, hips, the inner surface of the thigh to the abdomen, chest, shoulder and neck; sacro- and coccygodynia, pains in the pelvis, ischuria, tenesmus, dysmenorrhœa, etc. Both the menstrual flow and catarrhal discharges are at first increased, and later diminished, and often completely abolished. Masturbation and "Lœdium coities" are often practised, and nocturnal pollutions are present with an abundant thin discharge. If conception take place pregnancy may normally run its course, and parturition is followed by an improvement owing to the loosening of the tissues. In some cases, however, the puerperal condition is accompanied by increased atrophy. In the later stages of the disease prenancy is impossible.

Diffuse chronic parametritis is further accompanied by constitutional disturbances of all kind. It leads to sympathetic reflex neuroses of both cerebral and spinal origin, and to vaso-motor and trophic disturbances of various kinds, and also to the most extreme type of hysteria, the cerebral form of which the author describes in the classical language of Forster.

These reflex neuroses however, must not be held as conclusive of the existence of an atrophic parametritis. They merely show that the nervous system of the pelvis suffers from an atrophic process, and may appear in puerperal atrophy if the ganglia be involved. On the contrary, ovarian excitement following periospheritis furnishes a peculiar and distinctive picture. As to prognosis, in diffuse atrophic parametritis an arrest of the disease may be expected, but not a complete cure.

The surgical treatment of the disease is unsatisfactory. Castration and clitoridectomy are useless. Benefit may be derived from stretching the dense cicatricial tissue under narcosis and securing the vagina in the most favorable position after dilation. Palliative injections of atropine are of service. Immobilization of the uterus by tampons, regulation of defecation, clysters of cod-liver oil, in sympathetic reflex neuroses. Bismuth subnitrate in spinal, nitrate of silver in cerebral, acetate of zinc in vaso-motor disturbances, preparations of ammonium, castoreum, valerian, in disturbances of general nutrition.

Simple atrophy of the pelvic connective tissue may originate in a patient who has passed through parturition, lactation and the puerperal diseases in rapid succession, and goes hand in hand with atrophy of the uterus. Hysterical symptoms may appear, but are not so severe as in atrophic parametritis.

IV. Neoplasms of the connective tissue of the pelvis. In this section is given the description of three cases of intraligamentous myofibroma, of which two cases were successfully operated upon. The author further mentions the increase of fatty tissue in the pelvis in general obesity and after the subsidence of acute pelvic cellulitis.

V. The pelvic connective tissue may be displaced and compressed by neoplasms of other organs, and by the presence of parasites, by burrowing abscesses, subserous myofibromata, by sarcomata and carcinomata, by intraligamentous cysts of the ovaries and parovarium, and by tubal pregnancy. The statement of the author appears important that the results which he obtained in total extirpation of a carcinomatous or sarcomatous uterus, operating through the vagina, were not more satsfactory than the earlier palliative operations, and that he can record only one case of radical cure, in which no reappearance of the disease had occurred in eight years. Freund, therefore, in suitable cases recommends the abdominal operation.

The second part of this section is devoted to a discussion of nineteen cases of echinococcus of the pelvic connective tissue observed by Freund, and the author adds to his personal experience three cases reported by Schroeder. Eighteen of Freund's cases were from his Breslau clinic, and one from his Strassburg clinic. The chief value of this part of the treatise is found in Freund's original observations and his minute descriptions of every case. He is thus enabled to describe the entrance of the parasite into the pelvic organs either by burrowing or migration from organs lying above, or their primary origin in the pelvic bones or the connective tissue around the rectum. That they first appear in the ovaries is doubtful. The parasite may pass into the connective tissue on the sides of the pelvis, to the uterus and urinary bladder, and downward to the perineum. The pelvis may be entered through the ischiatic foramen, through the interval between the muscles and blood vessels under Poupart's ligament, and the parasite may penetrate under the peritoneun of the anterior abdominal walls. It may also remain under the peritoneal covering of the various organs.

The invasion of echinococcus into the pelvic connective tissue causes a chronic pelvic cellulitis, pelvic peritonitis, displacement and distortion of the pelvic organs, chronic inflammatory hypertrophy and venous stasis, ischæmia and ulceration of the pelvic organs, and occasionally it may perforate the neighboring hollow organs, but not the peritoneum on account of chronic inflammatory thickening of the pelvic connective tissue. Finally, the echinococcus may die and putrefy.

Anatomically, in pelvic echinococci, the parasite consists of a maternal cyst with daughter cells, and is not present in the ordinary alveolar form. The parasite may remain quiescent for a long time, or it may take on a rapid growth, and produce disturbance of function of the pelvic organs, with suppuration, fever and general marasmus. Evacuation may occur through the rectum and bladder; very rarely by the uterus or vagina. In reference to diagnosis, the position of the subperitoneal tumor, between the uterus and the rectum, or more laterally in the posterior region of the pelvis, close to the pelvic walls, without connection with the uterus or its appendages, is important. The feeling is described as that of a tense elastic bladder with homogeneous walls.

The diagnosis may be confirmed by examination of the contents of the tumor by aspiration; yet the puncture may lead to suppuration within the sac.

The parasite is best removed by freely opening the tumor and evacuating its contents, shelling out the mother cyst, either by laparotomy or through the vault of the vagina. If it be impossible to remove the mother cyst, the tumor should be sewed to the abdominal wall and treated by either temporary packing or by drainage.

Selections.

GENIUS NOT A NEUROSIS.

BY JAS. G. KIERNAN, M. D.
Chicago, Ill.

From *The Neurological Review*, Vol. I., No. 4.

Certain alienists, notably Moreau de Tours, have claimed that genius, especially poetic genius, is a neurosis, and that the man of genius is but a

> Poor lunatic who makes his moan,
> And for a while beguiles his lookers-on.
> He reasons well. His eyes their wildness lose;
> But, if you hit the cause that hurts his brain,
> His eyeballs roll, and he is mad again.

Nathaniel Lee, the periodical lunatic who wrote these lines, had very good reason for accepting this theory. Nor is Nathaniel Lee the only mad poet. Lucretius, Marlowe, Ben Jonson, Bunyan, Wycherley, Torquato Tasso, Molière, Swift, Pope, Defoe, Rousseau, Goldsmith, Johnson, Savage, Cowper, Byron, Walter Scott, Coleridge, De Quincey, Rogers, Southey, Shelley, Emerson, Saxe, Poe and Victor Hugo all suffered from insanity.

Poetry is an emotional outburst of a perception of similarities in unlike things. Hence, the "fine poetic frenzy" of the poet is not unlike the emotional exaltation of the insane. Many a matter-of-fact young man or woman, in the emotional stages of insanity, has composed respectable poetry, and lost this faculty on recovery. In periodical insanity, the appearance of poetry is often an indication for medical treatment. Rush had under care an insane woman, over whose songs "he hung with delight." Pinel had cited the case of a young girl who, during paroxysms of insanity, expressed herself in very harmonious verse, and lost this faculty on recovery. Van Swieten has had under observation a very similar case. Hammond reports the case of a rhyming clergyman.

The analogy is, however, of the most superficial kind; none of these lunatics was capable of a sustained poetic flight; nor do the cases cited bear out the theory. Lucretius' acute attack of insanity marred his poem, as will be obvious on comparing portions of Book III. of *De Rerum Naturâ* with the rest.

Marlowe's wild outbursts against society and religion, his delusions and persecutional visions, were of insane origin; but the insanity marred his genius. His "Jew of Malta" is a mass of tumid bombast compared with the "Merchant of Venice."

Ben Jonson's insanity arose from his gout, and marred much of his work. When most free from gout, his work is the best. His hallucinations of vision were those of gouty insanity.

Bunyan was a paranoiac, in whom emotional perversion, and hallucinatory disturbance therefrom resulting, were in the foreground. He, as Spitzka has pointed out, made a nearly complete recovery, and not till then did his "Pilgrim's Progress" appear.

When Wycherley's mind gave way under debauchery, his work, when it did not consist of unconscious assimilations, was mere drivel. During Torquato Tasso's periodical attacks of insanity, nothing poetic was produced.

Swift's middle-ear nerve disease caused insane suspicions and irritability. In his youth he was wild and erratic, and was rejected at first for his "B. A." degrees as "conspicuously deficient." His servitude to Sir William Temple held his insane tendencies in check by its rigid discipline. He marred his writings by the introduction of physically disgusting irrelevant topics. From his irritability resulted his cruelty to Stella. His insanity once fully developed, his creative powers vanished.

Molière's epileptic insanity tinged his genial humor with sarcastic suspicion. His savage diatribes against physicians increased or waned as the number of fits decreased or increased.

Pope's malignancy, coarse language to women, egotism, suspicional delusions, mean conspiracies for notoriety, tricks on his dearest friends, were the outcome of an insanity which checked his intellect at the boyish stage. Pope was intellectually a hebephreniac all his life. His poetry was a "mere methodic art," and hence was the result of forces antagonistic to insanity. Defoe manifested insanity only as a result of age.

Rousseau, like Pope, was the victim of the unequal development of mind and body after boyhood, a hebephreniac. He manifested much the same suspicional delusions as Pope, on one occasion accusing David Hume of an attempt to murder him. He believed that enemies were leagued against him, and delighted in cheap notoriety while affecting to despise it, and manifested this very obtrusively. He was, in all his philosophy, the outcome of Locke. Had Locke never existed, there would never have been a Rousseau.

Goldsmith had a slight imbecility of judgment which led to his inventively stupid deceptions of his mother, his "uncle Contarine," and his incongruities with his surroundings. The "Deserted Village," "Vicar of Wakefield," "She Stoops to Conquer," were not the offspring of mental disease; but his "Animated Nature" displays his imbecility of judgment to a great degree, albeit it is concealed by a pellucid style. His mental defects were but a slight twist in the judgment, and a blunted moral sense.

That the sanity of Johnson, the great "Cham" of literature, should ever be doubted, will seem strange to the students of English literary history who remember the "club," with its brilliant conversaziones. Macaulay has said, Boswell, and not his own works, made Johnson immortal. Johnson's father suffered from a mental twist which tinged all his ideas with gloom, and made him the prey of imaginary disease. He fell under the sway of the established church, and the simple creed, "fear God and honor the king," repressed all religious emotionalism and the mental disturbances which result therefrom. This creed strengthened the checks on his emotions. Johnson himself was the born victim of nervous and other diseases. He suffered from hallucinations of hearing; he heard his mother, then many miles away, call him "Sam! Sam!" When he entered a doorway he would suddenly whirl and twist about in strange gesticulations. He would often stop in the middle of the streets to go through this ceremonial. At a dinner party he once twisted off the shoe of a lady who sat next him in one of these performances. He was subject to lengthened periods of mental torpor, when he hardly knew what was going on around him. His "Rasselas" indicates that he, at times, suspected his own mental condition. Much of this "insanity of manner" served as a safety-valve to work off the morbid force. The comfortable routine faith of the English church acted like spiritual laudanum on such a mind. That the keenness of his mind was blunted by the torpidity of disease, is evident in his works. As Leslie Stephens remarks, had he "gone through the excitement of a religious conversion, he would probably have ended his days in a madhouse." His mental disease marred his genius, as cracks distort the reflecting powers of a mirror.

Savage had all the characteristics of the lunatic who is a reversion to the barbarian type of man, born in the midst of civilization with which he is unable to reconcile himself. His works, kept alive by Johnson, are not intellectually above the level of the "sweet singer of Podunk," or some similar locality, and their equals are daily thrown into the waste-paper basket by the insane-hospital physician after his return from his daily visits to the scribbling insane. The genius in Savage was swamped by the insanity.

Cowper was subject to a periodical melancholy. His poetry, composed under this influence, was beneath mediocrity. Fortunately for Cowper, he fell under the influence of the religious quietists, and the soothing influence of their mild creed favorably affected him, so that "The Task" was the outcome of a period of sanity between the periodical attacks.

Byron came from a family in which insanity was rife. His desire of cheap notoriety, his obtrusiveness of his own affairs, his mendacity, his affectation of vices which he did not possess, show that he was, as Swinburne says, a "brilliant boy" whose intellectual development into manhood was checked. The insane tendency checked the full development of genius. In him the hebephreniac tinged with paranoia appears.

No clearer intellect ever made its appearance in the world of letters than that of Walter Scott. Not until his brain broke down under the mental strain of the failure of the book-publishing speculation and the struggle to pay his debts, did the dead Byron appear at his window. There is no mental weakness in the "Lady of the Lake," nor in "Rob Roy"; but it appears in every page of "Count Robert of Paris," written when paretic dementia had seized him.

Southey and Rogers both fell victims to coarse brain disease, dementia, the distant outcome of apoplexy. When they became insane their poetry ceased to appear.

Shelley was, like Cowper, a victim of periodical insanity; the insanity alternated with literary productiveness. When Shelley saw "the woman with eyes in the center of her breasts," he could not write poetry. When his delusions of persecution were present, no masterpieces made their appearance.

Coleridge was the prey of his own ideas, usually of outside suggestion, and for this reason his productions have a fragmentary character. He himself draws a pretty good picture of his mental state when he says: "Why need we talk of a fiery hell? If the will, which is the law of our nature, were withdrawn from our memory, fancy, understanding and reason, no other hell could equal what we should then feel from the anarchy of our powers." De Quincey's mental condition resembled that of Coleridge: the weak wills of both produced their meconophagism.

The apoplexy which produced Emerson's insanity destroyed his genius. Poe, who resembles Swift in his liking for the physically disgusting, manifested this liking most strongly after recovery from periodical insanity, which, in him, took the form of drunkenness. He analyzed his own mental state in his sane periods, and from such an analysis sprang the "Fall of the House of Usher." In one of Poe's insane periods he was dragged from one Baltimore polling place to another, and voted by ward-workers. From the resulting exhaustion he died.

Saxe is the victim of melancholia, the consequence of "railroad spine." Victor Hugo was the least demonstrably insane member of an insane family. His brothers, sisters, several ancestors and collateral descendants were insane. He received a methodic training, and fell under the influence of the English dramatists. His insane tendencies were at once held in check, and afforded a safety-valve. At times his insanity converts intended sublimity into drivel. There is much in his Les Miserables and L'Homme qui Rit that is at once weak and insane.

Genius is not a product of morbid mind. In the exceptional instances where the two co-exist the genius is evidence of a healthy conservative element struggling with the incubus of disease. Insanity may, in its emotional stages, touch the lips of a timid poet: but his song soon sinks beneath the disease. The best-balanced poets have been the greatest. Shakespeare's works are evidence of a well-balanced intellect. Nothing exists to impugn the sanity of Milton, Addison, Wordsworth, Tennyson, Klopstock, Goethe, Schiller, Burger, Filijaca, Camoens, Freiligrath, Longfellow, Dickens, Thackeray, Freytag, or of most of the stars of literature. The Elizabethan dramatists were keen psychologists, and the examination for insanity which Ben Jonson brings on the stage denotes a rare knowledge of mental phenomena. Sophocles wrote his tragedies at a great age, and his sons called him into court to have him placed under guardianship as a dement. He refuted the imputation of his mental condition by reciting "Œdipus Colonus," which he had just composed, to his judges, who thereupon pronounced him mentally competent.

The doctrine that poetic genius is an offspring of disease is a dangerous one; it deprives poetry of its elevating character, and excuses the excesses of the poet on the ground of irresponsibility, at once hardening the community and degrading literature, and such a doctrine should be enunciated only on the most well sustained basis.

The subtle chain of associating power which constitutes genius in its highest and best sense, differs very decidedly from the disjointed condition existing in paranoia. The highest poetic genius is closely akin to the highest scientific. Huxley's phrase, "the scientific use of the imagination," was the expression of a profound truth.

RECOVERY AFTER PARTIAL EXCISION OF THE LUNG, AND NEPHRECTOMY.—A laborer, in the Hospital Saint André, Bordeaux, 49 years old, received two wounds, one on the left thorax between the ninth and tenth ribs, parallel with the intercostal spaces, was four centimetres long. The lung protruded from the wound, but there was neither hemorrhage nor subcutaneous emphysema. The urine early contained blood. The lung, becoming congested and finally almost gangrenous, was on the tenth day after the injury removed by Dr. Demons, with the ecraseur. No hæmoptysis followed the operation. Profuse suppuration ensued, the pus containing urine. High temperature, continuing with septic symptoms, led Dr. Demons to perform nephrectomy on the twenty-eighth day. The kidney was found broken down, and to contain a large abscess. The thoracic wound was closed with silver sutures, and a drainage tube inserted in the lumbar incision. This was removed in about two months. The patient entirely recovered.

ON THE SURGICAL RELATIONS OF THE ILEO-CÆCAL REGION.—A thorough investigation of the morbid conditions of the ileo-cæcal region leads to the following conclusions:

1. That certain modifications are corrected spontaneously or by the process of resolution under treatment.

2. In the early stage of ileo-cæcal disorders, medicinal or mechanical measures are advantageous.

3. That extra-peritoneal punctures and incisions are beneficial in cæcal inflammation, with or without fæcal abscess.

4. Disorders involving the peritoneum, when not promptly relieved by general treatment, warrant exploratory opening of abdomen.

5. Impediments of the intestinal canal or morbid accumulations in the abdominal cavity, accompanied by meteorism, call for immediate surgical interference, with laparotomy.

6. In case of simple stenosis or malignant growths involving the ileo-cæcal connections, ileo-colostomy is indicated.

7. Gangrenous portions of the intestinal canal necessitate resection, and either direct restoration by suturing the ends or the formation temporarily of an artificial anus.

8. Operative measures in the ileo-cæcal derangements should not be delayed until the physical powers have become prostrated, but resorted to while there is capacity for reaction of the vital forces.—*Dr. Gaston, Journal of American Medical Association, Oct. 9, 1886.*

OXLEY'S SUGGESTED ALTERATION IN THE COMPOUND LICORICE POWDER.—Having found that the above preparation produced very severe griping in many instances where I had ordered it, the griping being particularly severe in some of my younger patients, I have ordered the following formula for some time past, in which anise fruit is substituted instead of the fennel, and one-fourth part of ginger is added. The altered formula runs thus: Senna and liquorice-root, of each 2 parts; anise fruit and sulphur, of each 1 part; sugar, 5¾ parts; ginger, ¼ part. This altered preparation is quite as satisfactory in its laxative properties, is less liable to gripe, and is as pleasant to take as the officinal powder, and I would suggest its trial in cases where the powder as now prepared produces the disagreeable effects to which I have referred.—*Lancet, Oct. 2, 1886.*

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BUFFALO, N. Y., JUNE, 1887.

In Memoriam.

DR. THOMAS FORTESCUE ROCHESTER.

Dr. Rochester is dead! His great, loving heart, which beat for all humanity, forever stopped. His words of kindly counsel, of friendly admonition, of cheer and encouragement to the disconsolate and afflicted, shall never more be heard. He has gone, and left a void which no man shall fill.

It has been well known to all our readers that for two years he had been in poor health. His was a peculiar case in its medical aspects. The commencement of his malady seemed due to an accident—his being thrown from a sleigh. From this he apparently recovered, but soon began to suffer from a species of asthma, upon which internal treatment made little impression. After a while it was evident that he was suffering from hydrothorax of the right side, which in due time was relieved by aspiration. From the first to the last he was aspirated *twenty-two* times, and the total amount of fluid removed in these various operations amounted to nearly seventy pints. Relief always followed the thoracentesis; nevertheless, the fluid reaccumulated, sometimes rapidly, sometimes slowly. It was further evident that the secret of all his trouble was to be found in the kidneys, and the diagnosis of contracted and granular kidneys, that was made many months before his death, was verified at the autopsy.

As the renal lesions became more pronounced, so his prostration became more marked, and during the last three weeks of his life it several times seemed as though it were but a question of a few hours. However, with his magnificent manhood asserting itself he seemed each time to rouse and show himself superior to mortal conditions. At the last, however, his mind wandered, and he finally died, comatose, at 5 A. M. on May 24th, at the age of sixty-three.

Thus passed away one of nature's noblemen whom to know was to respect, to admire, to love.

He was descended from colonial English settlers of Virginia, eldest son of T. H. and P. E. Rochester, and grandson of Col. Nathaniel Rochester, Deputy Commissary-General in the Continental Army, and for whom the city of Rochester is named.

The fifth mayor of Rochester, Thomas H. Rochester, who held office in 1839, was the father of Thomas F., who was born at Rochester on October 8, 1823. Incidents of boyhood days are lacking, but we know it was a boyhood well spent, for it brought him to that alma mater of many noble men, Geneva College. Graduating in 1845 with the degree of Master of Arts, he turned to medicine, and pursued that study at the University of Pennsylvania, taking the degree of M. D. in 1848. For the year following he was assistant physician at Bellevue Hospital, where he enjoyed rare opportunities of practice and study. Then came a year and a half abroad, during which time he traveled in many countries in Europe, and also continued his professional studies.

Dr. Rochester returned to America in 1851 and established himself in New York City, where he continued from June, 1851, to June, 1853, when he came to Buffalo to take the chair of the Principles and Practice of Medicine and of Clinical Medicine in the University of Buffalo. He had married, on May 6, 1852, Margaret Munro, daughter of the Rt. Rev. W. H. De Lancey, D. D., D. C. L., Oxon., first Bishop of the Diocese of Western New York.

Since 1861 Dr. Rochester had been consulting physician to the Buffalo General Hospital; and from 1853 to 1883 he was attending or consulting physician at the Sisters of Charity Hospital.

In 1848 he was elected a member of the New York Pathological Society. He was a member of the Erie County Medical Society, and was its president in 1860. He was president of the New York State Medical Society in 1875-'76, and its delegate to the International Medical Congress at Philadelphia in 1876. He was also an ex-Vice-President of the American Medical Association.

In the early years of Dr. Rochester's practice in Buffalo he was in partnership with Dr. Austin Flint, Sr. Most of the older practitioners of Buffalo with whom Dr. Rochester was associated are dead. A few remain, an ornament to their profession and an honor to their city. Especially in the State Medical Society were his professional associations agreeable and eminent. Of Dr. Rochester's professional publications may be mentioned 'The Winter Climate of Malaga,' being observations made during personal residence; 'History of the Medical Societies of Buffalo'; 'The Army Surgeon'; 'The Modern Hygeia'; Medical Men and Medical Matters of 1776,' and many monographs on various professional subjects.

Some of the foregoing are of no little local interest. With No. 2 of the first volume of the *Buffalo Medical and Surgical Journal and Reporter*, September, 1861, Dr. Rochester began the publication of a series of articles on the 'History of the Origin and Transactions of the Medical Societies of Buffalo,' which was continued through three numbers. These papers are probably the best record of the early years of the society ever made. He brought the abstract of proceedings down to April, 1861, beginning with 'the earliest record of medical association for professional improvement and advancement,' which was entitled 'The Constitution and By-laws of the Medical Society of the Village of Buffalo, adopted July 16, 1831.' The first officers of the association were: President, Dr. Cyrenius Chapin; Vice-President, Dr. Judah Bliss; Recording Secretary, Dr. Bryant Burwell; Corresponding Secretary, Dr. Josiah Trowbridge; Treasurer, Moses Bristol. The by-laws of the society in that early time, as recorded by Dr. Rochester, are curious. They made polite behavior incumbent upon members, forbade self-laudation or assumption of greater or more special skill than any of the other members,' and declared 'deductions from bills made out agreeably to the fee bill, as unfair and unprofessional, where the parties have the ability to pay the full amount.' This association died of inanition when less than a year old. It was not until 1845 that the Buffalo Medical Association came into being, formed as a city medical society by members of the Erie County medical faculty. The organizers were Drs. J. Trowbridge, Moses Bristol, A. S. Sprague, George N. Burwell, John S. Trowbridge, Charles Winne, Josiah Barnes, F. L. Harris, H. N. Loomis, H. M. Conger, F. H. Hamilton, and Austin Flint. Dr. Josiah Trowbridge was the first president. This history was compiled with great care by Dr. Rochester, and is an interesting record even to the non-professional mind, particularly as regards the cholera cases of 1849 and 1854.

On February 24, 1863, Dr. Rochester delivered an address to the graduates of the Medical Department of the University of Buffalo on 'The Army Surgeon,' which attracted wide attention, and was published in the *Buffalo Medical and Surgical Journal* for March, 1863. It was virtually a memorial to Dr. Charles H. Wilcox, Volunteer Brigade Surgeon in Gen. Patrick's brigade, and afterwards Surgeon of the 21st Regiment, New York State Volunteers.

For many years, during Dr. Miner's able management of the *Buffalo Medical Journal*, it contained frequent contributions from Dr. Rochester. Notable among these were papers on cholera, in which are recorded many interesting facts relating to the epidemic of 1854, with observations on cases at Suspension Bridge, Niagara Falls, and Buffalo.

Dr. Rochester was identified with various public institutions. He was president of the Buffalo Fine Arts Academy, and a practical patron and promoter of art. He was also a life member of the Young Men's Association, and a member of Trinity Episcopal Church.

Besides the widow he leaves six children to grieve at the loss of a kind father and a considerate friend—Mr. Nathaniel Rochester, cashier of the Third National Bank; Dr. De Lancey Rochester, who has been associated with his father in the practice of medicine for some time; and Miss Elizabeth, Miss Margaret, and Miss Emily Rochester, and Mrs. Charles B. Wheeler.

During the evening of May 25th there took place perhaps the largest meeting of the Erie County Medical Society which it has ever known. This was called especially for the purpose of paying its tribute to the memory of the deceased. An abstract of its proceedings will be published in the next number of THE MEDICAL PRESS. The unanimity of the speakers in ascribing to him all that praise which was justly his due was most pleasant to note.

And not the least among the many encomiums called out by his death have been the unanimous and hearty tributes accorded by the public press of Buffalo. There is perhaps no physician now living whose death would have been regarded and spoken of by the daily papers as a greater public calamity than has been Dr. Rochester's.

Thus, for instance, wrote the editor of *The Express:*

"He was generous beyond prudence. Few if any of his fellow-citizens ever gave so large a share of their means as he habitually gave of his to works of charity and public beneficence. His hand was free as his heart was warm. Enjoying for many years a splendid income from his practice, when called upon for subscriptions he rarely stopped to think that this was not the same as an income from real property. He gave too liberally. He was the least selfish of men and one of the most considerate. If indeed the Lord loveth a cheerful giver, Thomas Fortescue Rochester must have been, all his matured life, one of the Lord's best beloved.

"He was a leader in good works. He went ahead with enterprises of great public importance, which required the stimulus of self-sacrificing benevolence, when he might better have been content to stay well in the rear. But he could only ask others to do when he had himself done his utmost. He was foremost in establishing charities, in founding hospitals, in building churches, in promoting a general love of science and the arts,—always striving for the welfare of the community in which he lived, for the benefit of the indigent and the wealthy alike. In a word, he was the ideal fellow-citizen."

And thus the editor of the *Commercial:*

"We speak of Dr. Rochester as a leader of his profession in Western New York, as a public-spirited citizen, as a man of broad and generous sympathies, as a man of 'light and leading' in this community. His voice was heard, his money was given and his great social influence exerted in almost every good cause that has appealed to good men in Buffalo during the last thirty years. His home has been a center of refinement, culture, piety. He himself has been a pillar of his church and the chief ornament and strength of the Medical College, which first drew him to Buffalo, by offering him a professorship, and to which he remained intensely loyal to the very end of his life. Surely, the death of such a man 'in the youth of old age,' is a very grievous public misfortune. The world will go on as usual; Buffalo will wax rich and prosperous. There is no man whose place cannot be filled after a fashion. But men like Dr. Rochester are the *select* men of a community. They are always few in number, and it sometimes seems as if there was really no one left to take their places."

It does not fall to the lot of the commonplace physician to call out, even by his death, such expressions as these.

At a special meeting of the Council of the University of Buffalo the following touching memorial was read by his life-long friend, Hon. Jas. O. Putnam:

"The associates of the late Dr. Rochester in the Buffalo University share the general sorrow in view of his death. He was the last of the group of distinguished physicians who founded, or were early associated with the Medical Department. The names of Flint, Hamilton, White, Miner, Rochester, have not only given honorable renown to our University, but they rank with the foremost of those who have advanced the science of their profession. The professional brethren of our lamented colleague will speak elsewhere more particularly of his professional career; we would linger for a few moments over the memory of the man and the citizen. He was a man of great purity of character and of broad human sympathies. His eminence gave him a large clientele among the rich; but the tributes of affection and gratitude given him by the poor during his long illness, whom he gratuitously served, are the enduring testimonials of his tender heart and his unselfish nature.

"He was a man of positive opinions. In Church, in State, in every sphere of is activities, he had earnest convictions and uncompromising action. His convictions rested on principles interwoven with his moral nature, and what to some might seem a narrow partisanship was in fact a loyal consecration to what he believed to be duty. He kept his heart pure and ever obeyed its high instincts.

"Dr. Rochester was an ideal citizen. We recognize the wide distinction between a negative and an affirmative good citizenship. He was not content to be a builder of only his private fortunes. He felt and met the higher responsibility of citizenship. But for his large sympathy with the humanities which are the best exponents of our civilization he might have accumulated a private fortune that would rank with the fortunes of trade and commerce. But Dr. Rochester was, as has been well said, of the 'select few' who make the sacrifices which build and sustain the institutions which are the true glory of cities and States. Other men's gifts were never made the standard for his own. His generosity outstripped his prudence, and he took the lead in labors and sacrifices for the public weal where he might justly have followed. As his associates in the Council, we are proud of his professional distinction, but we are still more proud of those civic virtues which have left so beneficent results and so illustrious example.

"His last few months revealed his heroic character. Life was sweet to him, and while he brought to the Divine will the resignation of a Christian, his struggle against his fatal disease was truly heroic. With what patience he submitted to the painful ordeal that alone gave hope of restoration! With what energy he resumed his professional labors after his recent return from a gentler clime than ours, and while death was on his track! And how like a warrior fallen in battle he yielded at last only when life was fast ebbing away!

"Truly our friend lived 'the beloved physician' and the noble citizen. He died a Christian hero."

Lack of space forbids further eulogium here. With our next issue we expect to present some of the sentiments voiced by his colleagues and professional associates.

NUSSBAUM'S VIEWS ON THE LOCAL TREATMENT OF ERYSIPELAS.

It is but recently that the true character of erysipelas, as an infectious disease, has been recognized. Within the last ten years great changes in the method of treating it have taken place, at first without much success. Removal of sources of infection in the body, attention to hygienic conditions, cooling of the inflamed surfaces, local applications of tr. iodi., turpentine, and arg. nit., use of the knife or cautery, and administration of antipyretics did little to check the advance of the disease.

Later, when Hueter had demonstrated that cocci were to be found in the skin where erysipelas was present, and were absent elsewhere, the antiseptic method was tried. Erysipelatous surfaces were painted with tar, oil of eucalyptus, turpentine, carbolic acid, and boracic ointment, and foul-smelling openings were washed with strong carbolic solutions, still without preventing the progress of the disease.

But injections of two per cent. carbolic solution around the margin of the erysipelatous surface, and of a cubic centimetre of the solution into each four or five square centimetres of the surface, arrested its spread in every case. However, this treatment was found very painful, as was also Kraske's method of scarifying and overlaying with carbolic compresses.

Von Nussbaum states that erysipelas may be healed quickly and without pain by the use of ichthyol. The wound attacked by erysipelas was disinfected and covered closely with iodoform gauze. The erysipelatous surface, while still spreading, was painted with ointment made of equal proportions of ichthyol and vaseline. The part thus painted was covered with ten per cent. salicylic lint, and fixed with a gauze bandage. Next day the border was found to have remained stationary, while the inflamed surface was shrunken into yellowish-brown creases, and was painless. After three days the dressing was discontinued, as it began to affect the skin. Five consecutive cases gave equally successful results. Ichthyol collodion is recommended for applications to the face, and ichthyol soap for the scalp. Von Nussbaum considers ichthyol a reducing agent, *i. e.*, as acting on the cocci by making the soil where they multiply unfit for their nutrition. He does not regard it as an antiseptic, though it is so considered by some surgeons.

THE Council of the English Society for the Study and Cure of Inebriety, have completed arrangements for an International Medical Congress, to be held at Westminster Hall, London, July 5th and 6th, 1887. The object of this congress is to present and discuss the problems of inebriety medically, and from a purely scientific standpoint, by the best authorities, thus laying the foundation for a broader and more exact study of this subject. At the close of the second day, a dinner will be served to the Congress by the Society for the Cure of Inebriety; on the third day an excursion and reception will be held at the Dalrymple Home. Papers and addresses are promised from a large number of the most distinguished physicians, of whom the following are well-known: Dr. Magnus Huss, of Stockholm; Dr. Moeller, of Brussels; Dr. Baer, of Berlin; Dr. Magnan, of Paris; Dr. Binz, of Bonn; Prof. Marstorf, of Vienna; Drs. Kerr, Drysdale, Richardson, Cameron, Carpenter, Burrows, Bristowe and others of England; Drs. Parrish, Crothers and Mason, of America; Dr. Fitch, of Halifax, and many others.

* * *

In the May number of *The American Journal of Obstetrics*, Prof. Mann, of this city, has an admirable paper on the Removal of Solid Ovarian and Uterine Tumors, by Laparotomy, with a report of nine cases successfully treated. It is in effect the same as that which he read before the Alumni meeting at the Buffalo Medical College, March 1. No better results than his have been or can be reported from any part of the world, and his record is one of which he may justly feel proud.

* * *

The May meeting of the Buffalo Medical and Surgical Association was held in the new library building, in the lecture-room of the Society of Natural Sciences. This is its natural home, and here it should, and we hope always shall meet; its members breathing there more of a scientific atmosphere than they could in a cramped hotel parlor, or in a small squad drill-room.

* * *

La Gazette Médicale is the title of a journal recently started in Montreal, and edited by Drs. Paquet, Hingston and Desjardins. It is naturally the organ of the French portion of the Canadian profession, and is sprightly, original and valuable. We welcome it to our exchange list.

Even delirium tremens is now traced to a parasite: "the worm of the still."

Medical Examiner—"What did your father die of?"
Applicant—"Oh, just *plain* death."

Society Proceedings.

McKEAN COUNTY MEDICAL SOCIETY.

Meeting of February 3, 1887.

Reported by Dr. J. R. McCarthy, M. D., Secretary.

The Society met in Bradford, the President, Dr. Buss, in the chair. After the routine business, Dr. John Curwen, Superintendent of the Warren Insane Asylum, delivered an address on mental diseases, their diagnosis and treatment.

He said: As in the general practice of medicine a knowledge of physiology is essential to a correct treatment of pathological conditions, so in the treatment of mental diseases a knowledge of the healthy operations of the mind is essential to the treatment of diseases of the mind. Without entering into any special description or consideration of the various theories laid down in works on mental philosophy, we may assume as correct the divisions of the mental powers, given by Drs. Porter and Hopkins, under the three heads of intellect, sensibility, and will. That of Dr. McCosh differs mainly in the greater number of subdivisions of the cognitive and motive powers.

What is met with by every one in the ordinary routine of daily life, and distinctions formed on that observation, will be sufficient to guide us in all common cases.

We know, we feel, and we choose, or in other words, we have imagination, memory, reason and judgment. We have passions, emotions and affections, and it is by the operation of these that men are guided or directed in the ordinary duties of life.

No two men think alike, no two men act alike, and the diversity of mental operations is as great as the variety of the countenance, or the general appearance of the individual.

Every individual has certain peculiarities of thought, of action and conduct, which are distinctive of that individual, and seem to distinguish him from every other individual. Some men have certain eccentricities of thought or conduct, which are perfectly natural to them, and are what may be termed part of the original and natural make up of those men.

All these things must be taken into account when the question of mental disorder calls for an answer.

No rigid rule can be laid down which will cover all such cases, and any attempt to make such a rule will only confound things which ought to be kept distinct.

It has been too much the practice to set up a certain standard, drawn from certain theories of mental phenomena, and insist that every man shall conform to that or be considered insane; and from that has sprung the idea, so often expressed, that every man is more or less insane. Such a theory is false in principle and false in its application because it confounds things which require to be kept clear and precise. The correct and only just principle for guidance is to compare each individual with himself, at a period when he was considered by all those who knew him as in possession of sound mind. Trace out his antecedents as far as that can be done, note the action of his mind, the influence of his passions, emotions and affections, investigate his modes of thought and expression, and learn everything which he himself or his friends can tell, and then compare that with the condition he may be in, when called upon to to decide upon the question of mental disease, and the strong probability is that a correct conclusion will readily be reached in the great majority of cases. If such a plan be pursued, it will be seen that peculiarities of thought, modes of expression, and general conduct, are individual traits, and effect only that person, and are not to be considered general manifestations of mind in men at large, and are not to be considered evidences of mental disorder, unless exaggerations or perversions of the individual himself.

As a rule, it will be found that the disordered condition can be traced to some bodily ailment directly, or to some moral shock acting on the general system, and gradually causing disorders of one or more of the bodily organs. These are often very insidious, and every effort is often made by the person to conceal the trouble, and the mental equilibrium may be in a wavering state long before it will be observed by any but careful observers. Relatives do not wish to believe in the reality, and therefore too often blind themselves to facts and symptoms which they would be quick to observe in others.

Case.—A sober, serious, quiet man, gentle in manner, obliging, kind, attentive to his duties, respectful in language and conduct, experiences some sudden reverse, which causes him much worry of mind and loss of sleep, or has an attack of fever, and soon manifests a change of conduct, is careless in his dress and appearance, fretful, complaining, neglectful of the minor proprieties of social life, negligent in the discharge of his duties, vulgar and profane in language, light and trifling in his manner, with other changes in his disposition, which should lead to the suspicion of an attack of acute mania.

Another, bright, cheerful, hopeful, careful in the discharge of the different duties, in which he may be called to share, a kind and obliging neighbor, in his family relations attentive to all that will promote their comfort and happiness, cautious and prudent, passes through some severe sickness, or experiences some troubles which cause him to lose sleep, and soon he becomes dull, insists that everything is wrong and growing worse; suspicious of his neighbors, ill-tempered and abusive to his family, inattentive or utterly neglectful of his duties to his family, and to all with whom he has been accustomed to associate, gloomy, morose, indulging in fits of despondency, with loss of his usual caution and prudence, and prodigal in his habits; such a condition should lead those who have known him to be on the lookout for suicide, acts of violence, and ultimately deep melancholy.

Every physician is familiar with these things, and knows the extreme difficulty attending the effort to obtain the early history of such cases. But there is a class which is much more trying and annoying to the family and friends, where the intellectual powers seem to be in proper action, but where the whole moral nature is perverted. A man has an attack of fever, of greater or less severity, and on his recovery, it is found that his character is changed, and from being kind, gentle, good natured and truthful, he is perverse, cross and seemingly bent on doing all he can to make the situation of all the other members of the family uncomfortable, while he talks well, gives plausible excuses for all he does, is sharp in his business transactions, and always keeping himself, before strangers, free from these actions and conversations which give so much trouble to his family; often, while in the midst of the most annoying conduct to the members of his family, if a stranger is heard approaching the whole conduct changes and he assumes a totally different manner and conduct. For a long period, it will be impossible to trace any positive intellectual aberration in such cases, and they can only be classed as those whose moral powers are disordered. That some intellectual aberration may be suspected is true, but it cannot be proved in a satisfactory manner, and consequently the person continues an annoyance, and often a terror to his family, until some overt act brings him into notoriety, and then he often is considered only vicious and depraved, and not morally perverted. The distinction to be observed in these cases, between wickedness and moral perversity, has come on after an attack of some disease, which has led to a total change in the man's moral condition.

The two great divisions in which all mental disorders may be placed, are those of exaltation and depression.

Under the former will be classed the various forms of mania and monomania, and under the latter, melancholia and dementia.

In mania, the first symptoms will be a general exaltation of different faculties; the patient will be benevolent and affable; more than usually pleasant in his manner; he feels good; talks lively, and says he feels first rate; will be exalted beyond reason; begins to be very wealthy, and may give figures beyond computation; will be loud in his conversation, and joyous in his manner; busy all the time, so that he cannot find time to sleep, and as acute mania is coming on he becomes altogether restless, and sleepless, and does not take time to eat, or to attend to the calls of nature. As it progresses, he cannot contain himself, or control himself, and a fearful outbreak may take place at any time, so that he has to be restrained.

The system is found to be run down, and below par; the nervous system especially is exhausted. The origin of most cases is from an overstrained system, and from great loss of sleep. If the patient cannot be got to eat and sleep he breaks down. As long as he can be got to eat and sleep, he is safe.

In melancholia the digestion is always bad, and the patient is always greatly depressed, and morose; he is always uncommunicative, and wishes to be left alone. Acute melancholia is the most difficult mental disorder to manage. Those afflicted conceal every thing and brood over their imaginary troubles; you cannot obtain from them their peculiar views, that you may be enabled to meet them.

Acute mania is the most frequent, and is the easiest to manage. The patient does not think there is much the matter with him, and is more communicative. Where there is much sleeplessness, the sooner he is treated the better, and the more readily is the difficulty overcome.

Acute depression at the commencement is evident only from the patient's manner; he will not acknowledge there is anything the matter with him, or that he has any trouble; he will say there is nothing the matter with him, and he doesn't want to be bothered. On account of their being less demonstrative, decided attention is not called to them so early; the friends do not become alarmed so easily, and the condition progresses, so that nearly all cases become acute. The whole system will always be found to be below par, and so much below that the patient loses power of self-control. When he loses power over himself he is insane.

Conly said fifty years ago that insanity was loss of the power of comparison. This is true to a great extent. Insanity is loss of power of control. It may come from overwork, or anything that will harrass the patient continually, and keep him from sleep. The system always becomes reduced, and the greater the depression the worse will be the case. The most violent cases of mania are those who are the weakest.

There is a certain class of cases of acute mania, rare, it is true, and on that account more to be watched, where there is excessive restlessness, jactitation, a perfect babel of words without any connection; the pulse very rapid and weak, and the whole appearance that of exhaustion. Such cases run their courses in ten days or two weeks, ending in death, unless the excitement can be allayed and sleep produced and nourishment freely administered.

In the treatment the first indication is to give a free purgative. It is best to begin with a powder of six grains of calomel, and ten grains Dover's powder at night, followed in the morning by oil or magnesia. Avoid opium as much as possible. Put them on plain nourishing food. If they will not eat, feed them. Give them plenty of milk and eggs. Give hypophosphate of iron and tonics.

Give bromide of sodium and chloral at night if needed, and recuperate the general condition. There is no secret in treating mental diseases. Treat the case as you would in any other condition where the system is below par.

Watch the patient closely; some must be restrained, but in all cases give them as much freedom as possible; use no more restraint than is absolutely necessary, but keep them under observation continually. It is difficult to do this in a private family, and it is rarely done; in fact, we might say it never is done. This is the reason why these diseases cannot be treated in a private family as well as in an institution for the purpose. Friends rarely or never will take the trouble to be as watchful as necessary.

Melancholia is more difficult to treat than mania. The general condition will be similar, but with usually a lower condition of the system. They are always less communicative; they will be morose and sometimes altogether silent, so that it will be extremely difficult to learn the channel their minds are running in, and consequently difficult to meet their peculiarities and manage them. Treat them as you would in acute mania, and at the same time urge them to exercise, for they mope about. Look after their bowels, for they generally are extremely constipated. It is difficult to relieve this constipation sometimes, for they forget and neglect themselves. Give them plenty of good plain nourishing food, and see that they have evacuations every day, and that they get sleep. The last is the most difficult to accomplish, for their thoughts distract them and they resist the tendency to sleep.

In melancholia there is generally a suicidal tendency; there is not one in twenty that it is not present in; they will meditate on it, and plan, and make arrangements; they will try to deceive, and they will lie about it. If they assure you they don't think about it then look out for them, for this will be a cause of anxiety more than anything else. Always distrust them, and especially when they are the most plausible, for they will use every manner of deceit; they will deceive even themselves.

The third form of treatment is mental, the moral hygiene. Fix their minds upon some subject, something that will occupy their minds continuously if possible, and what this should be depends on the case, and resources at your command. It will be very different with some from what it will be with others. The mind will run in a certain groove; push it out of this groove if possible, and direct their motives and ideas. The constant, the unremitting attention required, is such that it cannot be had in private practice, for friends are not willing to take the trouble to do it.

In answer to Dr. Straight, he said that opium was called for sometimes, and it would be necessary to use morphia hypodermically sometimes; but it was a dangerous remedy, on account of the tendency to form an opium habit, and consequently should be avoided as much as possible.

In answer to Dr. Dorn he said it was sometimes difficult to separate melancholia from mania. It was not necessary to differentiate very closely, however, since the case, whichever condition it may be, must be treated largely on general principles.

He gave bromide of sodium largely; it did not have the tendency to derange the stomach that potassium bromide had. He rarely found congestion sufficient to require a purge. The necessity of the purge would be on account of accumulations from continued constipation.

When the pulse is up give citrate of potassium and tartarized antimony, and then, if necessary, something further to bring down the pulse. Where there is great irritability, give bromide of sodium and chloral, of each fifteen grains. Avoid giving large doses on account of the liability to derange the stomach. Of all things keep the stomach in good condition. The patient must be nourished. He had gone the round of the more special remedies, and finally settled down to general principles, depending mostly on hygienic treatment.

Dr. Dorn reported a case of membranous croup, upon which tracheotomy had been performed forty-eight hours before. The patient was doing well, and he was anxiously awaiting the result, hoping the case might terminate in recovery. Heretofore all the cases he had operated on had died. Retrospectively he felt fully justified in operating, for he felt that he had not in any case hastened death, but had invariably prolonged life, had always relieved intense suffering, and had in some cases given strong hopes of recovery. His rule was to give chloroform. It robbed the operation of its terrors, there was less shock afterwards, and he felt that it could be given with comparative safety. He urged that the operation should be performed whenever it was indicated, since it gave the patient a better chance and often the only chance of recovery; it always prolonged life and always relieved the intense suffering. If there were no other reason than the last one he would feel impelled to operate as an act of humanity, unless intubation was resorted to. He had had no experience in intubation.

Dr. Thomas S. Kane said: Apropos of the mortality after tracheotomy, just mentioned, I wish to report a case operated upon within the last month by my brother, Dr. Evan O. N. Kane, and myself. The operation was performed for the relief of membranous croup upon a girl aged five years, of light complexion and healthy parentage. She had been ill for three days, and at the time we operated was very much exhausted. The respirations were very rapid and feeble, and the pulse irregular, but averaging 210 per minute. Chloroform was given and the operation performed; the shock was slight, and after removing what membrane was below the opening the child breathed freely. We had no tracheotomy tube, and the need of operation being imperative, we used a common flexible catheter, leaving it in place for the night. On the following morning we replaced it by a piece of a large silver catheter (No. 24 French, I think) bent to the proper curve. Owing to the want of a double canula, the cleansing of the tube was a matter of great difficulty. On the third day after the operation Dr. Preston called and kindly offered his own tracheotomy tube. There was considerable secretion of a tough muco-purulent character, apparently arising from the bronchi. This secretion coated the sides of the trachea to such an extent that it had to be removed three times during the day and once or twice during the night. For this purpose my brother improvised a tiny curved probang, by cutting off the end of a flexible catheter (No. 8 French) and fastening some antisepticised horsehairs to the end of it and the stylet, in the same manner as in the ordinary bristle probang, only on a very small scale. This worked admirably. For two days the alimentation had to be mainly rectal, but after that time she was able to swallow, and her appetite increased steadily until the time of her death. The air was moistened constantly with an atomizing spray in front of the tube. At the end of one week we removed the tube and she commenced to breathe through her mouth, but we left the wound partially open, as the secretion was still quite copious and we feared to obstruct respiration, while when the wound was open she could readily expel it by coughing. By the tenth day we were able to close the wound entirely without causing annoyance to the patient, but in the fear that the parents might be alarmed in case she strangled we preferred not to fasten it, but leave it covered with a soft dressing, which was practically air tight, yet could be removed by the parents in case of alarm. She was by this time cheerful, played with her toys, ran about the room, had a good appetite, could speak loud enough to be understood, and her temperature and heart's action were normal. On the evening of the twelfth day she seemed still improving, although we noticed a very slight streak of bright blood in part of the expectoration. This we referred to the wound, which was covered with healthy granulations. She denied feeling any pain. The next morning we were summoned in haste. I was unable to go, but my brother went and found the child dead. There was nothing unusual about the appearance of the body except the extreme whiteness of the face, the lips particularly. The account given by the parents was that she had waked looking well and had asked to be dressed, as usual. While sitting upon her mother's lap, having her hair combed, she had suddenly thrown her arms over her head twice, given a few gasps and fallen over dead without a cry. I must add that the operation, dressings, spray, etc., were all done with the greatest antiseptic precautions, and that the sloughing around the tube was slight.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, May 3, 1887.

Reported by Charles G. Steele, M. D., Secretary.

Dr. J. B. Coakley presided. Dr. J. W. Keene was unanimously elected a member.

Dr. Charles G. Steele read a paper on "Paraldehyde," in which he described its physiological actions. Rules for its administration were given, and its therapeutics dwelt upon at some length. Dr. Steele gave the histories of several cases in which he had used paraldehyde to advantage, and in closing his paper gave the following general conclusions in reference to the use of the drug:

1. Paraldehyde is a pure hypnotic, and is not an anodyne.

2. It is safer than any of the hypnotics, save, perhaps, the bromides.

3. It must not be used indiscriminately in place of chloral hydrate. There are only certain cases in which it is indicated, and in which chloral is contra-indicated.

4. It will serve a grand purpose in those cases of insomnia and cerebro-spinal disturbances, where the circulation is weakened and a nervous sedative is required.

5. It is an excellent substitute for chloral, the bromides and valerian in the treatment of delirium tremens and acute alcoholism.

6. It may prove of great service as an antidote to strychnia.

The paper was discussed by Drs. De Lancy Rochester, Strong, Wetmore, Vandenbergh, Hartwig, and Hubbard of Illinois, who was present at the meeting.

Pneumonia, whooping-cough and measles, were reported as being the prevailing diseases. Several interesting cases were reported by Drs. De Lancy Rochester, Hinkel and Wetmore.

The committee whose duty it was to report a Building Committee named the following: Drs. Dagenais, John Cronyn, Howe, W. W. Potter, Park, Diehl and Cary.

The chair announced the death of Dr. William Ring, for many years a member of the Association, and called upon Dr. P. H. Strong to read a minute which he had prepared. Dr. Strong paid a deserved tribute to the deceased physician.

The President appointed Drs. W. W. Potter, Crego and Hartwig as Finance Committee for the ensuing year.

It was announced that Dr. F. R. Campbell would read a paper at the June meeting on the "Etiology and Prevention of the Summer Diarrhœa of Children."

The Association adjourned.

Book Reviews.

TRANSACTIONS OF THE ASSOCIATION OF AMERICAN PHYSICIANS. Vol. I. 1886.

This Association is to the American profession what the German Congress of Physicians or the Congress of French Surgeons are to our trans-Atlantic brethren. The Association is new, having been organized in June, 1886, and this volume of two hundred and sixty-one pages is its first collection of papers. When we bear in mind that it is supposed to contain the choicest medical, as the American Surgical Association is supposed to contain the best surgical talent in the country, we would naturally expect to find the pages of its publications replete with interesting matter. And in this respect we certainly are not disappointed. The President, Prof. Delafield, took for his subject the matter of Chronic Catarrhal Gastritis, and furnished a most entertaining study of its etiology and treatment. His paper is followed by a careful consideration, by S. Weir Mitchell, of The Tendon-jerk and Muscle-jerk in Disease, and especially in Posterior Sclerosis. Dr. Porcher follows with a most pleasing presentation of a hackneyed but ever important question—The Method of Managing Typhoid Fever. Space fails to characterize all the papers as they deserve, since all are scholarly, but those which strike us as most original are by Councilman, on Certain Elements found in the Blood in Malarial Cases, with a handsome lithograph that really illustrates something; Welch, on an Experimental Study of Glomerulonephritis; Sternberg, The Bacillus of Typhoid Fever; Prudden, on Experimental Mycotic or Malignant Endocarditis; and Polk, on Periuterine Inflammation. Altogether we do not know of a more creditable collection of papers in any volume of the same or nearly the same dimensions, and we congratulate the Association most heartily on the excellent work it is accomplishing. This of itself is enough to refute the injustice of some unkind remarks made, when its organization was completing, by a few who were *not* invited to participate, and which appear to have been prompted purely by jealousy.

THE PRACTITIONER'S HAND-BOOK OF TREATMENT; OR, THE PRINCIPLES OF THERAPEUTICS. By J. Milner Fothergill, M. D. Third edition, pp. 660. Philadelphia: Lea Bros. & Co. 1887.

There is probably, all things considered, no more fascinating writer on medical subjects in the English tongue than Dr. Fothergill, and perhaps has not been since Watson's death. To a keen sense of the necessities of his readers he adds that happy way of imparting useful hints which makes a perusal of his writings almost as profitable as would be a conversation with the man. These peculiar gifts have made his writings most deservedly popular, and of them all none more so than the work mentioned above, whose third edition is now upon the market. It won universal encomiums upon its first appearance as a work largely original in design and most successful in execution. To the book in its previous dress have been added, beside much sectional matter, two new chapters, one on the dietary in acute disease and mal-assimilation, and the other on the management of convalescence. Of how much value these additions are can be told only by a careful reading, but we are sure every reader will be delighted with them. They alone make it worth the while of every owner of a copy of the first edition to procure one of the third. The author's appreciation of the work and position of American physicians is by no means the least acceptable feature. He dedicates the work to Da Costa, and quotes freely from Austin Flint, besides numerous other evidences scattered through his pages. To be sure the easy colloquial style in which it is written leads to a certain carelessness of rhetoric which, nevertheless, is not above criticism. Such expressions as to "fasten a chill upon one" are always unfortunate, since they lead oftentimes to that blunder which perpetuates so much mischief, the mistaking a condition for an entity. Neither, properly speaking, do we "unload the liver" or "unlock the secretions," yet such phrases are too often used by those who know better. However, it is hard, very hard, to be consistent either in speech or action. And an occasional trifling blemish of this nature can not mar the effect of such valuable works as Dr. Fothergill's.

A PRACTICAL TREATISE ON IMPOTENCE, STERILITY AND ALLIED DISORDERS OF THE MALE SEXUAL ORGANS. By S. W. Gross, M. D., LL. D. Third Edition. Pp. 172. Philadelphia: Lea Bros. & Co. 1887.

It must be gratifying to both author and publishers that large first and second editions of this little work were so soon exhausted, while the fact that it has been translated into Russian may indicate that it filled a void even in foreign literature.

There is a great deal of misapprehension concerning the cause of so many fruitless marriages, the conspicuous tendency being to lay the whole blame upon the woman. As the author says, the importance of examining the husband before subjecting the wife to operation will be best appreciated when it is realized that in at least one instance in every six the trouble is really in the male.

No extensive additions have been made since the last edition was published, still on every page the author has shown how diligent a student he is of current literature. His is a careful and physiological study of the sexual act, so far as concerns the male, and all his conclusions are scientifically reached. The book has a place by itself in our literature, and furnishes a large fund of information concerning important matters that are too often passed over in silence.

A REFERENCE HANDBOOK OF THE MEDICAL SCIENCES. Edited by Albert H. Buck, M. D. Volume IV. New York: William Wood & Co. Buffalo: J. H. Matteson.

The fourth volume of this superb reference work is calculated to enhance its already well-earned reputation. Both in the eminence of its writers and the quality of its articles it stands unrivalled among works of its kind. The articles which have particularly pleased us are those on Inflammation, by Councilinau; Insanity, by several writers; Jaws, by Briggs; Kidney, by several writers, including Ransohoff; Labor, by Withington; Larynx, by Delavan, Morgan and Mackenzie, and others; Intubation, by O'Dwyer; various articles on the Liver and Lungs; Lupus, by Van Harlingen; Malaria, by Smart; Malpractice, by Merwin; Massage, by Graham; Micro-organisms, by Freeborn, and Microscopy, by Wilkins.

The illustrations are all of them excellent, there being more than five hundred of them, while the chromo-lithographs illustrating tumors of the larynx and cultures of various bacteria are as good as any of the kind we have ever seen. Evidently the editor and the publishers are the right men in the right place.

FÜHRER DURCH DAS MEDICINISCHE BERLIN. (GUIDE THROUGH MEDICAL BERLIN.) Fischer's Medicinische Buchhandlung. Berlin. 1886.

This little guide will prove invaluable to every American who proposes a visit to Germany for professional study. It is certain that Berlin is now *the* best city in which to study, out-ranking Vienna, Paris, and all the other European capitals in opportunities for painstaking post-graduate study. And here, within small compass the student may find all that information which he particularly wants, clinics, teachers and their hours, brief descriptions of the various scientific institutions, and lists of the best cafés, penséons, etc.; in fact everything which may facilitate his work while there. It is virtually official and consequently accurate to date. It may be ordered through any of the New York houses, or direct from the publisher at Charité-strasse No. 6. Price two marks.

BOOKS RECEIVED.

From Fischer's Medicinische Buchhandlung, in Berlin:
Führer durch das Medicinische Berlin (Guide through Medical Berlin.)

From P. Blakiston, Son & Co., Philadelphia, through Peter Paul & Bro.:
Evacuant Medication: FIELD.
Physician's Dose and Symptom Book. 17th Ed.: J. H. WYTHE.

From Geo. S. Davis, Detroit:
Practical Bacteriology: THOS. F. SATTERTHWAITE.

Transactions of the Association of American Physicians. Vol. I. 1886.

WANTS, EXCHANGES, &c.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

PHOTOTYPE F. GUTEKUNST PHILAD'A.

Thos. F. Rochester

The Medical Press
of Western New York.

Vol. II. JULY, 1887. No. 7.

ON THE CAUSES OF CARDIAC FAILURE IN HIGH ALTITUDES.

BY FRANK DONALDSON, JR., B. A., M. D.
Late Chief of the Clinic for Throat and Chest, University of Maryland, Baltimore, Md.

[Read before the American Climatological Association, Baltimore, May 31.]

Mr. President and Gentlemen—The extreme importance of this fact, that there is so often, not only in the weak and diseased but also in the strong and healthy, great dyspnœa and sudden cardiac failure in high altitudes, has not, I venture to assert, been sufficiently emphasized. It is not too broad a statement that many persons are sent for general or special reasons to high altitudes, who are done thereby permanent injury—especially may this be the case with those who are suffiering with any form of functional or organic heart disease. That such a procedure was or might be dangerous was forcibly impressed upon me in the course of some experiments (with the pneumatic cabinet) for the effect of rarified and compressed air upon the heart and circulation; and upon purely scientific grounds I declared in this Society a year ago that, before deciding a person to be a proper subject for treatment by rarefied or compressed air, *thorough examination* should be made of the *heart; and that no person found to have insufficiency or stenosis of the mitral or aortic valve, or the slightest tricuspid regurgitation, or a fatty or weak heart, should, under any condition, be subjected to treatment by rarefied and compressed air.*

You doubtless remember a paper by Prof. Loomis, read at our last meeting, "on the effects of high altitudes on cardiac diseases," in which he gave the history of six (he had then recorded twenty-two) cases of cardiac failure directly due to removal to a high altitude. In this paper Dr. Loomis says: "In these cases which I have quoted, as well as similar ones which have come under my observation, *the ventricular dilatation*, which was unquestionably the cause of the sudden development of the distressing symptoms, and from which dated the commencement of the fatal issue, seemed to be directly due to the effects on the *cardiac circulation of the change from a low to a high altitude.* I do not maintain that sudden cardiac dilatation might not have developed in any one of these cases under other conditions, but I do maintain that change in atmospheric pressure is a very important cause of sudden ventricular dilatation when any degree of heart insufficiency preëxists."

Finally, he declares that only with danger can a person whose heart is weak, fatty or diseased, pass rapidly from a low to a high altitude; and, indeed, I gathered from his subsequent remarks that a person with cardiac disease should under no circumstances be sent to high altitudes.

Dr. Loomis, then, had arrived at the same conclusion from clinical experience as the author had experimentally; and it seems that we may rest assured that there is great danger for the diseased heart either in high altitudes or in any form of treatment by rarefied and compressed air. We are also supported in this conclusion by Dr. Solly of Colorado Springs. In a conversation with the writer Dr. Solly bore with great emphasis on the extreme danger to the weak or diseased heart of a sudden or even gradual removal to high altitudes, and that he was convinced from many years' experience at Colorado Springs that it was a precaution almost entirely neglected by the *average* practitioner.

The fact, then, would seen to admit of no doubt, both for scientific and clinical reasons. What then is the cause of this cardiac failure? It is very generally asserted that the cause of cardiac failure in high altitudes, in rarefied air, is the *want of oxygen.* That the system needing more oxygen, more blood has to be sent through the lungs in a given time, thus increasing the work to be done by the heart, which often dilates under the sudden strain. This explanation, so generally found in the text-books, though applicable for very high altitudes, is at the same time based on a misconception.

First—The partial pressure of oxygen at normal atmospheric pressure is equal to 150 millimetres of mercury.

Second—So long as the partial pressure of this gas remains above twenty-five millimetres of mercury (one inch) the amount taken up by the blood will depend upon the amount of hæmoglobin in that liquid, and not on how much oxygen there is in the air.

Third—The partial pressure of oxygen even at so great a height as 10,000 feet would be 101 millimetres of mercury, at which the hæmoglobin could get all the oxygen necessary.

But, it may be urged, Paul Bert found an increased amount of hæmoglobin in the blood of animals in high altitudes, which would show a necessity on the part of nature for more oxygen. True, but this change takes place only after a very long time, probably not in one generation. Again, it may be objected that in many of those very cases sent to high altitudes the blood is poor in hæmoglobin. Doubtless this is true, but it is not the sick only, by any means, who suffer from dyspnœa and cardiac failure in high altitudes.

How may this clinical fact be more satisfactorily explained? However much the phenomena of normal quiet respiration may be changed in a highly rarefied atmosphere, the chief and immediate cause of dyspnœa and cardiac failure may, I think, be traced to *the diminished pressure on the heart walls and their consequent dilatation.* This fact may be made plain as follows:

The external air presses against the interior of the lungs with a pressure equal to that exerted on the same area by a column of mercury 760 millimetres high; it distends them and pushes them against the inside of the chest walls, the heart and great blood-vessels and contents of the thorax. The pressure thus exerted is not equal to that of the external air, since some of the total air pressure on the inside of the lungs is used up in overcoming their elasticity (equal to six millimetres of mercury), and it is only the residue, equal to a column of mercury 754 millimetres high, which pushes the lungs against the heart and great vessels. The actual pressure, then, on the heart walls, normally, is equal to 754 millimetres of mercury.

How is this pressure changed at an altitude, say, of 10,000 feet? The total pressure of the air at that altitude would be equal to a column of mercury 501 millimetres high. The pressure, then, upon the lungs and whole body would be lessened. But, as the person is breathing the same air as that around him, the respiratory act would be unchanged. Prof. Martin and the author found that neither the frequency nor depth of the respiratory act were changed in an animal placed in a rarefied atmosphere. There would be (as, again, we found) a slight fall in blood pressure, which would be very temporary; for the circulation being a system of closed tubes, is but little, if any, affected, and the pressure rises at once to the normal, owing to increased vasomotor action. There would be no increase of negative intrathoracic pressure. Finally, the only organ directly affected at moderate altitudes (of course, at very high altitudes, 12,000 to 18,000 feet, the dyspnœa from want of oxygen would be felt), say, from 3,000 to 10,000 feet, would be the heart, and for this reason. As we have said, the pressure on the heart usually is equal to 754 millimetres of mercury. At an altitude of10,000 feet, however, the general pressure being 501 millimetres, the pressure of the heart would be only 495 millimetres of mercury. Now the arterial pressure, and, therefore, the intracardiac pressure, would be the same as when the pressure on the heart walls was 754 millimetres. But one result could follow such conditions, and that would be a stretching and dilatation of the heart walls—especially of the right side—and this is precisely what is found in many of those who go into high altitudes for their health or for other reasons, and what we found in experiments upon animals. The heart, weak and diseased possibly beforehand, is unable to stand such strain as is put upon its dilated walls, and so we find its contractions weak, intermittent and irregular,—we have the murmurs, the syncope, the dyspnœa, which are often so marked in high altitudes.

Of course, the want of oxygen is a great cause of the dysnœa in very high altitudes; but we are quite justified, on physiological grounds, in saying that at the altitudes to which persons are ordinarily sent—three, four, six, seven, or even ten thousand feet—the hæmoglobin can take up all the oxygen the system needs.

Finally, then, and speaking purely from an experimental standpoint, I hold that there is danger to the weak and diseased heart, not only in the use of such apparatus as the pneumatic cabinet, but also in high altitudes; in which conclusion I am supported by the clinical experience of Prof. Loomis, and of Dr. Solly, of Colorado Springs.

And in this connection I might say that those gentlemen who are interested in the pneumatic cabinet ought certainly to have called more—I do not know that they have called any—attention to the great danger attending its use in cardiac disease. I shall accomplish the object of this short paper if I shall excite the comment and discussion on this most important point from some of the distinguished diagosticians here present.

STATE CONTROL OF MEDICINE.

BY LOUIS A. WEIGEL, M. D.,
President of the Monroe County Medical Society.

[An Address read before Monroe Co. Med. Soc. at its Sixty-seventh Annual Meeting, May 25, 1887.]

In complying with the Constitution and By-Laws of the Society, I have selected a subject which, though not new, is one which not only concerns the medical profession itself, but is said to be of vital importance to the community. I refer to medical legislation regulating the practice of medicine.

The standpoint from which this subject is usually considered is that medical laws are absolutely necessary to protect the public against quackery and imposture; that the lives of the people are directly endangered by incompetent and ignorant charlatans, and that it is the duty of the State to exercise a paternal control over its subjects and dictate to them whom they shall employ when sickness invades their homes.

But, as in everything else, there are two sides to the question. I propose, on this occasion, to present the negative side and investigate the practical results obtained by State interference in medical practice, and endeavor to show that no law has yet been passed which has had the slightest effect in suppressing quackery or protecting the community against imposture.

The law-making power has been delegated to our legislators, the representatives of the people, and the executive. They are simply the servants of the public, and it is expected of them to pass laws affecting the welfare of the State, the community and the individual. From the very nature of things there must be a limitation; a point is reached beyond which it cannot go without encroaching upon diverse interests and inherent rights, either of the people in general or the individual members of a given community.

In our republican form of government the people are sovereign; and it is for them to say what shall be done and what shall be left undone. The powers of a State are not unlimited; and when it performs the duties which its inhabitants have a moral and legal right to expect and demand, we ought to be well satisfied, and not ask it to go outside of its legitimate sphere and undertake to perform functions foreign to its constitutional and natural requirements.

It must be accepted as a self-evident fact, that physical perfection, or, at least, the physical well-being of individuals, plays an important part in the success and stability of a community. Hence it is perfectly proper for a State to adopt measures to preserve and protect the lives and health of the people.

At the present day sanitary regulations are considered within the scope of governmental function, and very properly so. With the well known indifference of the individual to whatever affects the many, and the entire absence of responsibility or moral obligation to act in the interest of our fellow beings, some higher power must step in and assume control of such matters. Hence there can be no objection to laws relating to quarantine, to State and local boards of health, with their manifold powers and responsibilities to prevent devastation of the community by sickness and death. Even the pecuniary loss involved would be an adequate reason for State interference. The State calls upon the medical profession for advice and assistance in this matter, because it is within the province of our science. Such assistance has always been readily granted without compensation or hope of reward. As Dr. Hutchins* has well said, "Medical men must always be advisory. The establishment of the various boards of health is the one great acknowledgment the community has made to the achievements and helpfulness of medical science; and this recognition is a gratifying recompense to all who have contributed to the result, and an unfolding promise of reward to all who may labor in this direction for the bettering of their kind." He evidently considers this recompense ample, for he holds that, "to claim that the medical profession is entitled to the emoluments of office in the execution of sanitary law is to claim a royalty from the engineer and plumber; and, because its ancestry discovered that soil saturation from privy vaults in crowded localities is inimical to the public health, its descendants should have precedence in the competition for the office of night scavenger."

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* Transactions Medical Society of New York State, 1884, p. 141.

Leaving out of consideration the execution of sanitary laws as foreign to our subject, it is self-evident that sanitary enactments and regulations are not only desirable but necessary. They affect and apply to the community. The community, however, is a complex body, made up of individual members who are exposed not only to various deleterious influences of a general character, but subject to special, local, constitutional or personal causes of sickness; in other words, they may become ill.

The very natural desire to regain health impels the individual to seek relief in medicine; hence arise the questions, shall it be his prerogative to choose his medical adviser and assume the responsibility of the choice himself; or is it proper for the State to interest itself in his personal welfare to such an extent as to limit him in the selection of his medical attendant?

These questions may be answered in the affirmative or negative. An affirmative answer to the first one involves an absolute denial of the right of State control over the action of the individual concerning his own personal being.

The enactment of laws in nearly every State in the Union regulating the practice of medicine would seem to indicate that an answer to the second question has been accepted, which concedes the right of the commonwealth to control medical practice.

The object of such laws is, of course, to suppress quackery and protect the community. It is, therefore, pertinent to inquire whether the desired result has been attained, or whether charlatanism and imposture still exists, in spite of the law.

At the annual meeting of the American Academy of Medicine, in 1885, Drs. Dunglison, of Philadelphia, and Marcy, of Boston, a committee appointed for that purpose, presented a report on "The Practical Working of Laws Regulating the Practice in the United States." The facts presented were obtained by correspondence with medical gentlemen in the various States and Territories, who were requested to give their opinion as to the efficient or inefficient operation of laws now in force, and as to the need of further legislation upon the subject. I cannot do better than to quote from some of the replies received.

Beginning with our own State, we are informed that the law of 1884 certainly has not been efficacious in excluding from our profession grossly incompetent and disgracefully uneducated men. The legislature grants charters to almost every applicant without inquiry; it recognizes licentiates of county societies, and, to cap the climax, the law generously makes a legally qualified practitioner of every quack who has plied his trade for "ten years last past."

Michigan answers, that, so far as is apparent, the entire good of the law has been to give lots of quacks a legal standing. Laws regulating medical legislation will be just so good or bad as the intelligent wishes of the laity may determine.

In Tenessee there is absolute and entire separation of State and medicine. Any and all may set up for physicians, and starve or make money, as the people decree. It is claimed that this system is the only one that would prevent the ultimate degradation of the medical profession into a mere trade.

The gentleman from Ohio believes that it will be impossible to protect the profession from ignorant men so long as the colleges are permitted to confer the degree of M. D. and charge a fee for it. The fee for a diploma is a bribe. Another gentleman from the same State says that just now the profession is a law unto itself, with little credit. Existing laws are practically inoperative. The average legislator is apt to consider legislation a scheme on the part of the doctors to drive out irregulars, in order to have the field to themselves.

Kentucky has a medical law; but the correspondent believes the failure to attain the object desired to be due to the prevailing incapacity of the public to appreciate the importance of the law, and because the irregular practitioner is protected and encouraged by the credulous and confiding public upon which he preys. Another opinion received from the same State inclines to the repeal of all laws. It says: "If we could secure a National Department of State

Medicine, limiting its service to quarantine of all ports of entry, and also to the management of veterinary quarantine over the States as well as in foreign trade, we had best trust the public intelligence to take care of itself in the choice of its medical attendants. The law of the 'survival of the fittest' would have an unembarrassed opportunity and would right everything."

Dakota has a medical law which, we are told, is going to prove an utter failure.

Connecticut has a medical tramp law, which, however, is easily evaded. It is is very difficult to get any legislature there to curtail what the people call their rights, forgetful of what are really their wrongs.

In Texas there has been a failure in obtaining legislation, upon which the *Texas Courier-Record of Medicine* rises to remark that, "The legislature says, 'Come all ye who are burdened by little knowledge and are heavy laden by rejected examinations; all ye refuse of Illinois, Missouri, come; come, too, the pretender and the hypocrite; come the homœopath, the allopath, the hydropath, the nopath, the electric and the physio-medical. The faith doctor come. Our fields are broad and our acres wide; our waters are still and our pastures green. Come, abide with us, bleed us, cheat us, murder us.'"

After all these gloomy reports of dismal failure, a ray of sunshine appears, and tracing it to its source, we find it originating in North Carolina, where the State society warmly congratulates itself upon securing a satisfactory law. We are also told that the bill was framed by prominent members of the society, "as we were lucky enough to have several members of the society in the legislature. We need no further legislation, and we will be happy if we can only keep what we have already."

In Iowa there is no law regulating practice; while in Maine the laws governing the practice of medicine are wretched in the extreme.

New Hampshire suggests that until public opinion is educated to see that laws of this kind are for the good of the people, rather than for the interest of the medical profession, it will be hardly worth the while to pass any further laws on the subject.

Georgia laments that the legislature seems to take a delight in refusing to pass any bill suggested by the profession or advocated by them; and California is able to contribute its share to the general rubbish-heap of useless and unenforced laws.

If any further proof of the inefficiency of legal enactment to suppress charlatanism is needed, I am at a loss to know what additional evidence I could present that would be more conclusive.

At this point it may be pertinent to inquire into the causes of failure. It cannot be denied that the medical profession itself is responsible, not only for the enactment of the laws, but also for their inefficiency. Imbued with the idea that it was its duty to protect the lives and health of the community, the profession in this State, unasked and unbidden, appeared before the powers that be and demanded the passage of "An Act to regulate the practice of physic and surgery." This was not last year, nor the year before, but in 1806. Having obained this, it is reasonable to assume that it ought to have been satisfied in getting what it wanted. That this, however, was not the case can easily be shown. The history of amendments, repeals and additions to the original law would make an interesting chapter and furnish abundant food for thought. To take this up, however, would carry me too far. Suffice it to say, that the inconsistencies and absurdities manifested are simply marvelous.

I firmly believe that, if no attempt at medical legislation had ever been made, the profession to-day would be held in higher estimation by the people, and occupy a still loftier position than now obtains. As new sects in medicine and systems of practice arose, the law was invoked to place them on an equal footing. The adherents and advocates of the new schools were, no doubt, sincere in their belief; and, as all are equal before the law, the commonwealth could not consistently refuse to grant them the same immunities and privileges already bestowed upon the so-called regulars. Yet this very fact gave rise to an unseemly strife, which not only brought them more prominently into notice, but resulted in degrading the dignity of the profession.

The public has never asked for protection in this matter. It simply says to us: "Mind your own business and we will take care of ourselves." Furthermore there is a feeling prevalent, on the part of the public, that all laws greatly and unduly favor and protect the medical profession against competition from quacks. The public does not care very much about having educated physicians. It gives its patronage and support to the educated and ignorant indiscriminately; and I am forced to admit that we are also responsible for this.

Every year the multitude of medical colleges throughout the land send forth a large contingent of half educated stupidity, endowed with the coveted half yard of parchment, which a confiding public accepts as a guarantee of competency. It certainly has no other standard to go by. The remedy for this suggests itself. The teaching and licensing bodies must be separated.

The profession is gradually coming to the conclusion that reform must take place within its own ranks before much can be accomplished outside. It is almost unanimous in the opinion that a diploma should not be accepted as a sufficient guarantee or evidence of competency. The principle involved in this is already accepted and acted upon by our army and navy departments, which require an examination as to the competency of an applicant, even though he have a diploma in every one of his coat pockets. Admission to the legal profession, in this State, is also based upon an independent examination. A diploma from a law-school is not a license to practice. The subject of preliminary examination of students and of State control of medical education has already been so thoroughly discussed, by others, that you are all familiar with it in its various bearings; hence I may dismiss it without further reference.

From the views expressed denying the possibility of medical laws to suppress quackery, and advocating the abolition of all enactments ostensibly intended to regulate the practice of medicine, you will perhaps be led to ask me, "Do you advocate 'free trade and no protection,' in medicine?" And I should answer, Yes, until it can be demonstrated that restriction by law is possible and necessary for the good of the profession, the state and the community. Do not interpret this, however, as an approval of quackery. Far from it. I simply maintain that we will lose nothing by standing upon our own merits. This is not idle speculation; it has been demonstrated practically. We are told* that the Medical Society of New Jersey was so hampered by laws passed from time to time for nearly a hundred years that, in 1866, it surrendered its charter and began its second century upon a voluntary basis. All medical laws were repealed. It only asked to become a legal corpus, and to make its own laws to govern itself as an associated body. This step was highly acceptable to all outsiders in medicine. Quacks of all sorts stood on the same footing before the law, with intelligent, educated physicians, and it satisfied them for a time. A few years' experience proved that their expectations were not realized, and that honor and respect came to the regular profession sustaining itself upon a scientific basis, while the contrast became more marked between it and others claiming a knowledge of the art of healing.

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* *Physician's Magazine*, Vol. I., No. 2. December, 1885, p. 139.

Again, in 1867, Dr. Hutchinson* of Brooklyn, delivered an address as president of the State Society, entitled, "The moral power of the profession, instead of legal enactments, the best agency in effecting medical reforms,"—a title which, in itself, contains volumes. He maintains "that the spirit which governs the legislative policy of this country is opposed to granting to the medical profession the protection of law, or restricting the citizen from placing his life and health at the mercy of the charlatan; that the efforts to elevate the profession and to suppress quackery by legal enactments have not only signally failed, but have operated prejudicially; and the sooner we rid ourselves of the idea of legislative protection, the better for us and the community. The medical profession of this country may * * * regulate the practice of legitimate medicine and furnish candidates for the doctorate, by the exercise of a moral power which cannot be disregarded or resisted, if we are true to ourselves, and which will be far more efficient than any act of legislation." Huxley† also believes that, "If there is any ground for Stat interference in regulating medical practice, it is *not* the protectio of the public against incompetency and quackery. If it were advisable, it would not be practicable, for it would not prevent any one from taking medicine or seeking advice from whom he pleased."

I fear that I have already transcended the limits of your patience; still I crave your indulgence long enough to state a few generalizations bearing upon our subject, and enumerate some of the objections urged against medical legislation by various writers.

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* Transactions Medical Society of N. Y. State, 1867, p. 59.
† Quoted in editorial *New York Medical Record*, 1883. Vol. XXIV., p. 591.

In passing laws the legislature proceeds on the principle of liberty of the subject which cannot be denied him. Hence any law restricting the right of persons to practice, secondarily interferes with the right of every one to choose his own physicians, and is thus doubly an invasion of perfect freedom.

It is difficult to fix a proper standard of professional attainment.

The opposition of spiritualists, clairvoyants, magnetic rubbers and charlatans of every kind, including patent-medicine kings, must be expected and met; and I may add, parenthetically, that the depth of the latters' purse might, perhaps, prove to be more potent than all your expressions of solicitude for the comfort and health of the community.

Public opinion must create the demand for measures to suppress quackery.

Medical legislation is open to the same objections and obstructions as prohibition and the social evil.

In conclusion, I desire to present the views of an eminent man upon the proper attitude of the profession toward quackery, and also the reasons he gives for holding to the opinion that the suppression of quackery is an utter impossibility. Even though over forty years have elapsed since Dr. Bigelow gave utterance to these views, characterized as they are, by an abundance of common sense, they are just as true to-day as they were then.

He says: * "Harmony and a proper *esprit du corps* may uphold the dignity of even an inferior profession; but the public rarely respects any class of men, the members of which have no respect for each other. I doubt if physicians do not sometimes injure themselves and their cause by showing too great a sensitiveness in regard to the temporary inroads of irregular practitioners. Quackery, whether carried on by the audacious enterprise of an individual impostor or upheld by the trumpeting of a fanatical sect, is to be considered a necessary evil, inherent in the constitution of society. It exists in every walk and occupation of life by the exercise of which men procure bread. The pettifoger in law, the Millerite lecturer in theology, the demagogue in politics, the system-monger in education, and the wonder-worker upon the brains and bowels of infatuated audiences,—what are all these but quacks moving in their respective spheres, and fattening upon the credulity of dupes? A certain portion of mankind are so constituted that they require to be ridden by others; and, if you should succeed in unhorsing a particular impostor, it is only to prepare the saddle for a fresh and more unflinching equestrian. It is not good policy to say or to write too much in regard to the pretensions of impostors. A celebrated author observes that 'many a popular error has flourished through the opposition of the learned.' By throwing the gauntlet at an insignificant man, you at once raise him to the dignity of being your competitor, and acknowledge him as a 'foeman worthy of your steel.' And if you discover uneasiness, resentment or ill-temper, the public conclude that you are influenced by your private interests. A race of quacks always does and must exist in society. They are wanted by the credulity of a particular class of minds. The fall of one dishonest pretender or one visionary sect is sure to be replaced by the elevation of another; therefore, it little concerns you to know what particular imposition has the ascendency at any given time. The public generally require time to get disabused of a favorite error; and, if too abruptly assailed they will sometimes hold on to it, as the traveler did to his cloak, when attacked by the north wind. A large majority of families are in the hands of regular practitioners. The remaining fraction, more or less, consists partly of minds so constituted that they require the marvelous as a portion of their necessary food; and partly of unfortunate beings, suffering the inevitable lot of humanity, who failing to obtain relief from the ordinary resources of medicine, seek for temporary encouragement in the dishonest assurances of any who will promise to cure them. The first class is the dog in the fable, catching at shadows; the last is the drowning man, catching at straws."

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* Jacob Bigelow: "Modern Inquiries"; Boston, 1867; p. 209, *et seq.*

"If quackery,* individual or gregarious, is ever to be eradicated or even abated, in civilized society, it must be done by enlightening the public mind in regard to the true powers of medicine. The community must be made to understand that there are certain things which medicine can do, and certain other things which it cannot do; that some diseases are curable by active interference, and others by time and nature alone; that true medical skill lies in discrimination and prognosis, and judicious adaptation of management, more than in assumed therapeutic power, in regard to special agents; and that he who professes to cure by medicine a self-limited fever is as much an impostor, or deluded man, as he who pretends to do the same thing with a fractured bone or incised wound. Nothing so much shakes the confidence of mankind in the medical profession as unfulfilled promises; nothing so much strengthens this confidence as fair dealing, exhibited in an earnest requirement and fearless expression of the truth. Such a course, by commending itself to the sensible and enlightened, may be expected, sooner or later, in some measure to influence the unreasonable and ignorant,—much sooner, indeed, than a warfare carried on in the arena of empiricism,"—or, I may add, in the halls of a legislature.

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* Loc. cit., p. 332.

SKIN-GRAFTING.

BY HERMAN MYNTER, M. D.,
Surgeon to the Buffalo General Hospital.

[Read before the Buffalo Medical and Surgical Association June 7, 1887.]

Gentlemen—During my recent visit to Germany and other parts of Europe I was more impressed with the results of skin-grafting, after the methods of Thiersch, than with anything else. It was simply astonishing to see the facility with which even the largest ulcerations were healed in a very short time. Having had plenty of opportunity to practice the method in the General Hospital since my return, I take pleasure in calling your attention to-night to this novel and invaluable method, so much more as I can show you several patients on whom I have practiced it.

Skin-grafting, strictly speaking, belongs to the plastic operations, especially to transplantations; is either an autoplasty or an heteroplasty, according to whether the flaps or particles of skin are taken from the patient himself or from some other human being. Under heteroplasty we class zoöplasty, when the flaps are taken from animals and implanted on human beings. Without entering into the subject of transplanting eyes, teeth, noses, etc., I shall here simply call the attention to the fact, well known and authenticated both at German universities and in remote India, that severed noses as well as fingers, etc., may be readjusted and then adhere. Happacher mentions one case, in which the lapped-off nose was seized by a dog but rescued and although cold reattached with success. The belief is in India so strong, Rudiman asserts, that executioners are compelled to burn the noses they cut off, so that the criminals may not readjust them. I mention this fact because the method of Thiersch is in every way similar to the readjustment of a lapped-off nose and completely differing from the well known Reverdin's skin-graftings. Reverdin transplants or grafts small pieces of cuticle on healthy granulations. Thiersch completely scrapes off the granulations with a sharp spoon, and after the bleeding is stopped, transplants large flaps on the raw surface, which has all the characteristics of a freshly made wound. That severed portions of the human body do not immediately lose life and may adhere to another part of the same or another individual, is a well-known fact. George Martin ascertained that "some separated bits of human skin maintained their vitality, when exposed to free air, for ninety-six hours, and others, in a confined space, for one hundred and eight hours, at the freezing point." If separated particles could maintain life so long, of course flaps might also be taken from amputated limbs, as is now done at Guy's Hospital, or from the cadaver, soon after death, as Prudhomme advised in the *Lancet* of May 20, 1871. Some physicians consider it of advantage to take grafts from young subjects to transplant upon aged, believing the proliferation of cells and their vitality to be greater in the young.

The question, which anatomical structures are necessary for the success of skin-grafting, has been settled in favor of the rete mucosum, sive Malpighii, the deep layer of the epidermis. The dry and dead epidermic scales have no influence. Marc See, of Paris, Hayden, of St. Louis, and others, scraped the cuticle and placed the scales on ulcers, but without any positive or convincing results.

I have somewhere seen or heard a statement that graftings with slices of corns have been particularly successful; but the deeper layers of corns possess, of course, vitality.

The grafts, if successful, grow by proliferation of their own cells, but besides this they have another effect; to stimulate the epidermic cells around the border of the ulcer to increased proliferation, so that cicatrization goes on rapidly, not only from the grafts but also from the formerly indolent boundaries of the ulcer. The grafts lose none of the peculiarities; the pigmented grafts from a negro, transplanted on a white man, produce pigmented cicatricies, as Bryant has shown. Reverdin denies this, and Coste especially declares, that "grafts borowed from a negro rapidly lose color and bleach out entirely, from the effect of progressive absorption of pigment." Coste, too, calls the attention to the difference between vegetable and animal grafts. A vegetable graft lives as "a parasite on the new soil, preserves its autonomy and individuality; an animal graft, on the other hand, loses its individuality and becomes truly a part of the new organism on which it has been implanted."

In regard to the growth of the graft, "the preponderance of testimony," as Johnson says, "seems to weigh in favor of the view that the epithelial germs grow in or upon their new soil, but that a more remarkable phenomenon is to be found in the influence which they exert in determining by their presence and contact the transformation of the embryonal cells of the granulations into epidermic cells, and this power seems to be communicated to the sluggish border of the ulcer."

It is not determined yet whether the new skin formed may become as enduring as the old, and whether it contracts as other cicatricial tissue. Agnew says that it does not possess either glands or hair, but that it enjoys a sensibility quite as great as that of the other parts. The belief in Germany was that the new-formed skin will grow in thickness and consequently in course of time become loose and movable as other skin. I have yet seen no statement how far hair and glands are formed in them in course of time.

It is of interest to us, particularly, to know that the operation of skin-grafting in its modern aspect has, so to speak, its origin in Buffalo; the late Dr. Hamilton having performed the first operation on Horace Driscol at the Sisters' Hospital in 1854, and reported the case to the Buffalo Medical Association June 27, 1854. Hamilton did not cover the whole ulcer, but called attention to the fact, afterwards brought forward by Reverdin, that "the grafts will grow, or project from themselves new skin to supply the deficiency," and that "it will not be necessary to make the graft as large as the deficiency it is intended to supply." Yet, Hamilton used pedunculated flaps, and Reverdin must, therefore, be considered the inventor of the method of skin-grafting, as he was the first to generalize the idea. He had "observed in 1869 little epidermic islands, which formed spontaneously in certain wounds," and he tried to obtain similar islands of cicatrization by grafting. Of course, the islands, he had observed, did not originate spontaneously, but simply from some parts of the cutis which had escaped destruction. He found out, too, that "the living epidermis of the deep layer would, alone, be necessary for the success of the grafting." Reverdin's method consisted in cutting out little bits of skin from the inner surface of the crus by aid of a venesection lance and sliding them upon the granulations by aid of a pin. The flaps were covered with diachylon plasters. It did not really matter how the flaps were applied, whether their upper or lower surface was in contact with the granulations, but it was a *conditio sine qua non*, that the granulations should be healthy and the patient in good health, too. Yet the healing took a long time; at least as many months or more, as days, or, any-way, weeks, by using Thiersch's method. Pollock mentions a case, similar to one I shall show you, where the wound was healed in seven months; by Thiersch's method we are able to heal almost any wound in from one to two weeks, if we can get skin enough to cover the surface of the wound.

Before describing this method I wish to call the attention to the fact that Martin, in 1864, questioned whether certain alkaline solutions might not serve to prolong cellular life; that he referred to the experiments of Caliste and M. Pelikan, that frogs' muscles maintain their irritability for fourteen days in a solution of potassa; and, lastly, that Brown-Séquard noticed the contractility of the iris for sixteen days after death, and considered it the result of its contact with the alkaline media of the eye. Thiersch, of Leipsig, uses a solution of chloride of sodium in his method of transplantation, and this alkaline solution may have much to do with the success of the method.

While Reverdin adhered to the use of minute particles of skin, Ollier, in 1872, gradually increased the size of the flaps from two, three and four millimetres square to four, six and eight square centimeters, involving the entire dermis. He observed, however, that after four to six days the epidermis fell away, and left the graft bare as if it had been blistered, and concluded that grafts were only successful when containing a lamella of dermis.

The last, and most important, progress in the method of transplantation has been made by Professor Thiersch, of Leipsig. Already, in 1874, Thiersh criticised Reverdin's method, by which we, to be sure, might stimulate "the cicatrization to renewed efforts, but were unable to produce wounds which had an inclination to heal." If it was the intention to supplant lost skin with new skin-flaps he advised to make horizontal cuts through the granulations and transplant the flaps on the deeper layers of the granulations characterized by firmer tissues and horizonal vessels. He called, at the same time, attention to the fact that already after eighteen hours the capillary vessels of the transplanted flaps could be injected through the vessels in the granulations.

In the Fifteenth Congress of German Surgeons, in 1886, he described his new method. The granulations are removed by the aid of a sharp spoon down to the underlying firmer tissues, and the rather copious bleeding stopped by pressure with compresses dipped in a solution of chloride of sodium, 0.6%. The bleeding stops generally in the course of five to ten minutes. The flaps are now cut with a sharp razor, generally from the outer surface of the humerus, and then transferred directly on the shining surface of the wound, deprived of its granulations. The flaps are five to ten centimetres long, one to two centimetres broad, and contain, even if microscopically thin, the whole papillary layer and a part of the underlying stroma.

The flaps are completely unraveled by aid of two probes, and then firmly pressed against the surface by aid of a soft sponge dipped in the same solution of chloride of sodium. The transplanted wound is covered with a piece of protective dipped in the salt solution and an antiseptic bandage applied over it, which is not disturbed for eight days; the superficial wounds produced by the razor healing in eight days under iodoform bandages. If the wound be completely covered with flaps it will be healed in about eight days, but in very large ulcerations, especially after severe burns, it is almost impossible to get skin enough from the patient himself, and one will then after eight days have the opportunity of seeing not only the growth of the flaps themselves, but also the stimulating effect on the border of the wound, which is quite wonderful to observe. It is astonishing to see how quickly the cicatrization progresses in those large ulcerations from the border and the numerous islands formed by the new flaps.

The method is of value especially in large ulcerations after burns, but also in the common chronic ulcers of the leg. The flaps adhere to all anatomical structures, even bone, deprived of its periost. I saw in Hamburg a patient who had had a new nose made from the integuments of the forehead. The wound in the forehead had been transplanted immediately after the operation, and the flaps had adhered to the bone itself, and the wound healed in a week. I need only mention this fact, and you will yourselves see the importance of the discovery. You have, I suppose, all seen the destruction of skin following phlegmonous erysipelas, leaving the whole arm, for instance, denuded of its cuticle. The only remedy formerly was amputation, but with Thiersch's transplantations recovery is easily obtained. In amputations of mamma, for very extensive cancers, it has always been a question whether operation ought to be performed on account of the great amount of tissue involved and the difficulty of healing the enormous wound. In these cases the wound may now be transplanted immediately after the operation, and heals in a week. The plastic operations on the face and neck, on account of cicatricial retraction, will be done away with, or greatly simplified; also contraction of the hands and fingers, depending upon cicatricial retraction of the skin, etc.

Czerny considers the new method especially of importance, because we, by transplanting from the same individual, need have no fear of inocculating syphilis, tuberculosis, etc., which might happen if we take the flaps from an amputated leg or some other person. Czerny has seen two cases of tuberculosis coming on after transplantation; they had, anyway, no symptoms of tuberculosis previous to the transplantation, and the legs, from which the flaps had been taken, had in both cases been amputated on account of tuberculous joint affections.

In regard to zoöplasty, I have on two patients tried flaps from a rabbit and a suckling pig. A majority of the flaps from the rabbit adhered (one out of three), while those of human skin all adhered. You can scarcely distinguish between them and the autoplastic flaps now, and cicatrization progresses as well from them as from the other flaps. I used them because the ulcerations were so large that it was impossible to get skin enough from the patients themselves.

I will add a short extract of some cases treated in the General Hospital during the last three months. They all had so extensive ulcerations that the wounds never would have healed if left to nature.

Case 1.—Jacob Weisenfeld, three years old, was admitted April 3, 1887. Had had his clothes set on fire by playing with matches. Has a large burned wound of left thigh, extending from crest of ileum almost to the knee. On anterior aspect of chest another wound six by four inches. A third wound embraces the whole plica cuticli, the lower third of humerus and the upper third of forearm.

April 25. Transplantation of six flaps from the little patient himself, and of nine flaps from the arms of the house staff, who kindly consented to give the little patient some of their superfluous cuticle. Each flap was two and three-fourths inches long and three-fourths inches wide.

May 10. Every graft adhered, wounds rapidly healing.

May 19. The arm has about four square inches, and the thigh seven square inches not covered, and thirteen grafts were taken from the patient himself.

June 6. Wound almost healed.

Case 2.—Regina Meier, six years of age, entered the hospital April 7, 1887. Her clothes caught fire while she was playing around a street fire, causing a burn extending from each shoulder down posteriorly over the glutæal region to the upper third of each thigh.

April 26. Transplantation of twenty large flaps, taken from the arms of ten medical students. Some flaps were taken from a rabbit, and some of them adhered, and cicatrization progressed from them. All twenty flaps adhered.

May 23. Everything healed except on right thigh; fifteen grafts from the patient herself were transplanted on the thigh. They all adhered, and the wound is now almost healed.

Case 3.—Florence Pell, eleven years of age, entered the hospital on April 26; was severely burned two weeks ago by her clothes set on fire. Extensive burns over the hips, nates and back of thighs, involving skin and superficial connective tissue. The burns extend close in around the anus and vulva.

May 12. Right leg transplanted with eighteen flaps taken from patient herself, which all adhered.

May 18. Thirty more flaps transplanted from another patient, who himself had an ulcer on the hand which was transplanted, and fifteen more grafts were taken from a suckling pig, none of which adhered.

June 6. Wound rapidly healing on the right side; the flaps from the pig did not take.

Case 4.—Julia Conway, age 28, was admitted to the hospital September 10, 1886. Patient had, for ten years, chronic specific ulcer of the left lower extremity, extending from the glutæal fold down to the ankle and occupying the whole posterior aspect of the leg. The ulcer indolent with no inclination to heal; thick callous border. The ulcer was first cauterized with Paquelin's thermocautery, anæthesia being produced by penciling with a 20 per cent. solution of cocaine; fourteen days afterwards transplantation was made from her arm in the usual way.

April 24. Transplantation of the lower half of the wound, a part of the former flaps only having been successful.

June. About two-thirds of the enormous wound healed and cicatrization progressing rapidly.

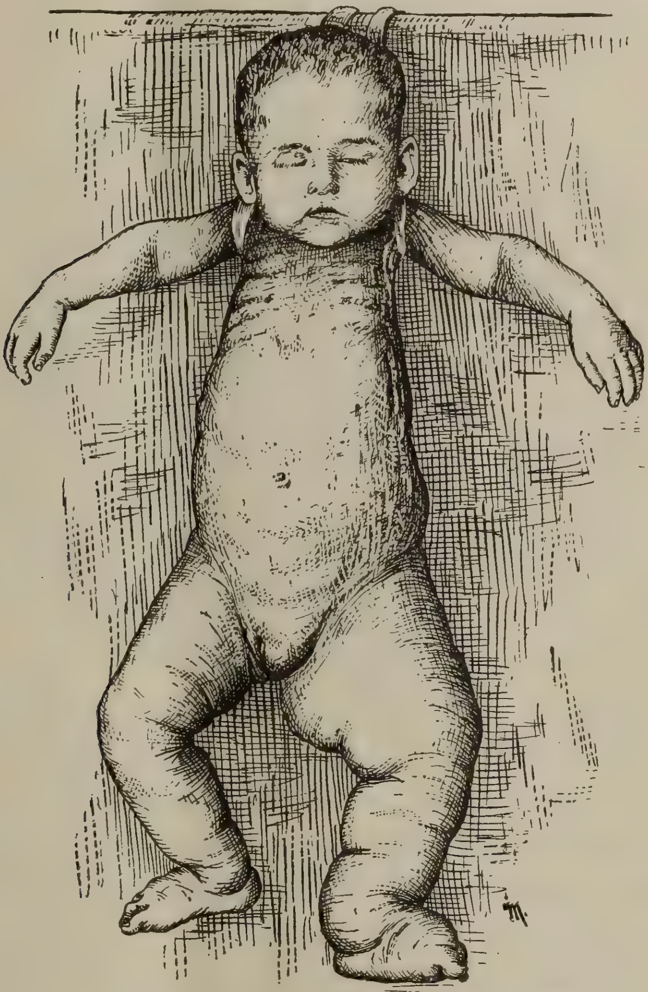
AMERICANS are naturally startled by seeing announcements like this in the *London Times:* "Mr. and Mrs. Jacobs have left off clothing of every description; they invite a careful inspection."

"DOCTOR, stop a minute. What do you do for a cold?" "Sit in a draught or get my feet wet. What do you want to get a cold for? Get up, Bolus!"—*Burdette.*

CONGENITAL ELEPHANTIASIS ARABUM.

BY ERNEST WENDE, B. S., M. D.
Lecturer on Dermatology, Medical Department, University of Buffalo.

Instances of congenital lymphangiectatic macroglossia and macrocheilia are met with. Cases of circumscribed lymphangiectasis of the skin are also occasionally encountered, which from their likeness to tumors are classified as lymphangiomata, but well-defined elephantiasis arabum due to congenital causes is not so frequent.



Elephantiatic Child as represented from Photograph.

This rare and interesting case occurred in the practice of Dr. Henry Baethig of this city, who informed me that labor seemed perfectly normal with the exception of a slight dystocia which he considered due to the enormously developed fœtus, resulting in a fracture of its right clavicle. That at birth he observed a great disproportion to exist between the lower extremities, otherwise the child appeared healthy. On the following day the measurements at the thickest portion of the thighs were respectively seven and one-half and nine and one-half inches. The parents of the babe in question are both hearty and hale. About their previous offspring there is nothing unnatural.

I first saw the child on the 10th of January last. It was then three months old, and from all appearances well-nourished. The normal contour of the foot, leg, and thigh was effaced. The parts were much deformed, thickened and enlarged.

The natural folds and furrows of the skin were greatly exaggerated. The enlargement extended up the left side to the lower border of the ribs on the exterior; midway between these and the crest of the ilium was situated a vascular nævus about the size of a silver dollar, having an irregular periphery. The labia on this side, and the clitoris, were also involved and greatly hypertrophied. The integument was rough, hard and tense, and studded with numerous nodules better felt than seen. It could not readily be pinched up between the finger and thumb, and pitted but slightly on considerable pressure, showing the presence of some œdema. The inguinal glands were somewhat swollen. At this date the circumference of the respective thighs was eleven and one-half and thirteen and one-half inches. All evidence of inflammation and lymphorrhœa was wanting. A small exostosis occupied the center of the right frontal eminence which is not brought out in the cut.

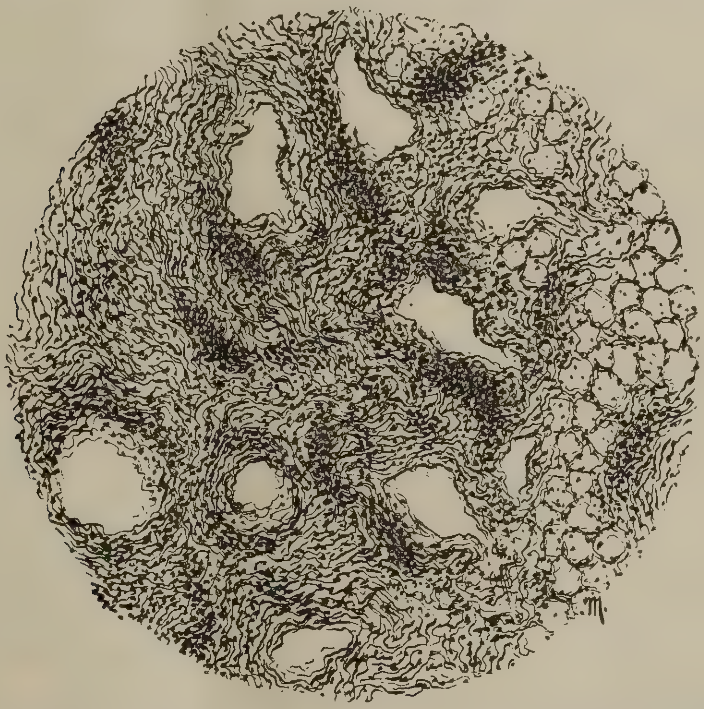
The child was subjected to a methodical compression of the skin by rubber bandages, with the view of increasing the circulation and subsequent absorption of the lymph. All surgical interference, as ligation of the external iliac or amputation of the limb, was entirely out of the question, owing to the vast amount of tissue implicated.

A few weeks later Profs. Jacobi and Helmuth, of New York, were consulted. These gentlemen confirmed the diagnosis and approved of the treatment. Prof. Jacobi recommended an ointment of iodide of potassium, incorporated in lanoline, with the hope of further aiding in the absorption.

The child died of meningitis on April 4th, after a short illness.

An autopsy was refused, but an examination of the limb was permitted. This was made with the assistance of Drs. Baethig and W. H. Woodbury, the latter taking a photograph, of which the illustration is a reproduction.

Cutting into the affected limb directly over and parallel with the femur, the first thing was a profuse escape of serous fluid, which could easily be increased on pressure. The sub-cutaneous tissue was seen to be hypertrophied. All traces of muscles, vessels and nerves were lost. In fact everything appeared entangled in a hard, fibrous, resisting mass of a whiteish color. The normal fat seemed diminished. The bone apparently not enlarged.



Microscopic section showing the enlarged lymph spaces, connective tissues, fatty tissues, herds of round cells. Lens ¾, reduced one-fifth.

Microscopically a fair idea may be had of the histological changes from the cut shown below, which was prepared from a piece of tissue taken from the leg, although all the changes that were present are not given in the section.

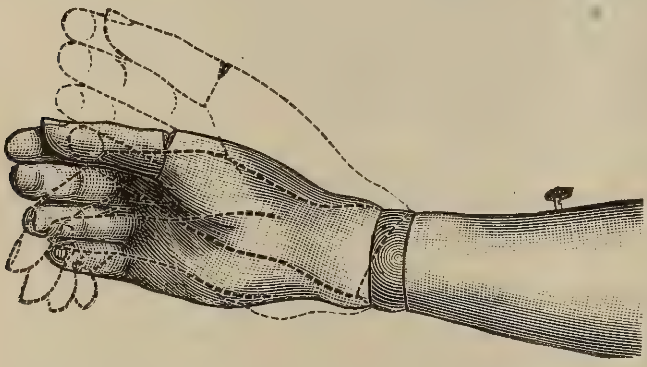
The connective tissue of the skin proper was greatly augmented, especially in the papillary layer. The sweat glands were distorted. The muscles had undergone fatty degeneration. Of the blood vessels many had their walls thickened, others were dilated, and some were plugged. Similar changes were met with in the lymphatics. The lymph spaces were enlarged and dilated. Herds of round cells were often brought into the field of vision.

My belief is that the etiology of this disease is not subject to one law only, as now promulgated by some authorities, but to several distinct causes.

In the tropical and sub-tropical regions the filaria sanguinis hominis and its ova produce inflammation and obstruction of the lymphatics, resulting in acquired elephantiasis arabum; but in temperate climes it has not been proven. In this singular case the embryos of the filaria were not taken into the stomach of the fœtus in utero with the drinking water, nor was it stung by a certain species of mosquito, which, according to Dr. Manson, of Amoy, is instrumental in its propagation and in the communication of the disease.

The illustrations for this article were drawn by Dr. H. G. Matzinger.

A NEW ARTIFICIAL ARM, INVENTED BY GEO. R. FULLER, ROCHESTER, N. Y.—No particular description of this prosthetic apparatus is needed further than the insertion of the accompanying illustration. It is provided with a ball and socket-joint at the wrist, which permits placing the hand in any position which can be obtained by a natural one. The inventor is the successor of the late Dr. Bly in his large establishment in Rochester.



IT IS stated that a very considerable quantity of injurious fungi is now finding its way into the market as mushrooms, and several cases of severe illness, caused by the consumption of what appear to be the button mushrooms, but which are really poisonous fungi are reported. These poisonous mushrooms have a yellowish appearance when cut, but otherwise appear exactly the same as the edible mushroom.

The Baby as a Water-Drinker.—In my earlier years of practice I devoted much attention to the study and treatment of infantile disorders, and have never regretted any labor or pains spent in the direction of ameliorating the ills of this large class of little sufferers. It would doubtless surprise many of my readers if I were to state that many infants annually die for want of water—pure drinking water!—and still the assertion is true. Let me invite the attention of mothers and nurses to the fact that three-fourths of a child's nourishment for the first twelve months of its existence is, or should be, water. In fevers and inflammations it is cruel to withhold this health-giving beverage, upon the principle that the disease will be made worse by the use of water. There is no disease in which water should be withheld. I have seen a little infant with cholera-infantum, with dry, husky skin, parched tongue, rolling and whining feebly, and almost in a state of collapse from frequent watery discharges, go into a sweet sleep, have a soft, velvety skin, a cessation of diarrhœa, and a speedy recovery ensue from the free use of *spoonful doses of iced water*, when all other agents had failed. Do not imagine that the watery discharges are due to too much water in the child's system. This is not the cause of your cholera-infantum. But, unless you supply this waste of water, your little patient will die *from the want of it.* My friend Dr. H. W. Davis tells me of his treatment of a few cases of cholera on common-sense principles by determining not to let them die for want of water. He supplied them with iced water by the bucketful, and the result was the cure of several hopeless cases. What is true of the adult is true of the child. Water, plentifully used, will never kill—will always afford comfort, and will many times save life.—*Southern Clinic.*

A correspondent writing to the *Cleveland Medical Gazette* says Billroth is "a marvelous surgeon—operates like a god—with an elegance and certainty with which only Billroth can operate. But he is a very poor speaker, and it is extremely difficult to understand him. I saw an incident which I think will interest you. A patient was brought before Billroth with a swelling in the perinæum. I thought of several things that it might be, and before I was aware of it, Billroth commences to lecture on the subject of hernia—for heaven's sake, what had this to do with the hernia? But I was soon to find out. In the course of his elaborate lecture, he suddenly launched upon ischiatic hernia. Now I saw the connection, and I thought: 'This is the place to see rare things.' Well, after he was finished the patient was narcotised. The initial incision was made with Billrothian elegance and grace. Lo and behold! in the depth sat a beautiful, round, circumscribed and yellow lipoma. We are not infallible, Billroth included."—*Exchange.*

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BUFFALO, N. Y., JULY, 1887.

TYROTOXICON AND DIARRHŒA OF CHILDREN.

In a recent paper on the nature and treatment of cholera infantum, Prof. Vaughn, of Ann Arbor, has rendered a great service by showing the essentially poisonous nature of a certain principle which he had some time ago isolated from milk which was not quite fresh, and which has been named *tyrotoxicon.* He shows how a number of patients, infants and adults alike, have been poisoned by milk which was kept warm, as drawn from the cow, for some hours. During this interval there elapses sufficient time for the action of the peculiar microbic ferment that causes the decomposition. Chemically, tyrotoxicon is diazobenzol, which is decomposed when heated to nearly the boiling point of water. It is formed quickly when the milk is placed in tightly-covered cans, and not sufficiently cooled.

Comparatively large doses of this poison, one to one and a half grains, given to cats, cause violent vomiting and purging, with death in a short time. Administration of small doses each day keeps up the vomiting and purging, and causes rapid emaciation; in other words, causes an artificial cholera.

Vaughn does not contend that this is the only poison that may be found in milk, and consequently in ice cream, etc., but that it is only one of a number of bodies produced by putrefaction, many of which are cathartic in action.

His conclusions with regard to the observance of proper precautions in dairies and pantries are very important;

1. The cows should be healthy, and the milk of those which are indisposed should not be mixed with that from healthy animals.

2. Cows should not be fed upon swill or refuse from breweries or glucose factories, or any other fermented food.

3. They must not be allowed to drink stagnant water.

4. They must not be heated or worried before being milked.

5. The pasture should be cleared of noxious weeds, and the barn and yard should be kept clean.

6. The udders, if at all dirty, should be washed before milking.

7. The milk should be at once thoroughly cooled. The can should be placed in cool spring water or ice water. The can should remain uncovered during cooling and the milk be gently stirred. Its temperature should be reduced to 60° F. within an hour, and it should be kept cool.

8. At no season should it be frozen, and no buyer should receive milk which has had a temperature higher than 65° F. after leaving the cow.

9. When received by the purchaser it should be kept cool and *covered.* There should be no connection between the refrigerator and any drain or sewer.

10. It should only be kept in vessels of tin, glass or porcelain. After using, the vessel should be scalded.

The peculiar ferment which causes the formation of tyrotoxicon is either the bacillus butyricus or one closely associated with it. It frequently develops in the stomach, and if food lie in the stomach or intestines undigested, putrefactive changes will occur there. Children often overload their stomachs with milk simply to quench their thirst, and here it may meet with various undigested products in connection with which the poison may easily form. This is especially likely to occur at the average festival or picnic, where the depressing effects of heat may often be superadded.

In the way of treatment, all further administrations of milk should cease. Next, the growth of the germ must be checked. It develops only in acid media, and an antacid is therefore indicated. The old chalk mixture is excellent, but it should be made with glycerine instead of sugar. The fact that the discharges may be alkaline does not contraindicate the internal use of alkalies, since blood serum is naturally alkaline and may not have had time to ferment; the reaction of such discharges in no ways proves that the contents of the upper alimentary tract are not acid. The repute which bismuth subnitrate has found is probably due to its being an excellent germicide. So, also, salicylate of sodium. A good germicide for this purpose is the mercuric chloride, though it must be given in tangible doses. The success which many have had with it is to be thus explained.

Those interested in Prof. Vaughn's excellent article will find it in the *Philadelphia Medical News* for June 18.

* * *

In a paper read recently before the American Association of Genito-Urinary Surgeons, Dr. R. W. Taylor, of New York, gave a *résume* of his results in the exhibition of oil of wintergreen in gonorrhœal arthritis. This oil is virtually one of the volatile salicylates. When given in doses of ten to twenty drops, in capsules, three or four times a day, it seems to influence the disease favorably, almost from the outset. He is very sure that the pain incident to the malady is very notably mitigated and that its whole course is made shorter by at least a half.

If it is capable of giving these results, the oil certainly deserves to come into great and general favor.

* * *

Prof. Vulpian, Dean of the Paris Faculty, and member of the French Academy of Medicine, died May 18, at the age of sixty-one. He began his celebrated physiological researches when first attached to the Museum of Natural History. In 1867, when a candidate for the chair of pathological anatomy, a charge of being a materialist and an atheist was brought against him; the Academy elected him by a majority of one. Later he took the chair of comparative and experimental anatomy. He was made Dean in 1875. By his extensive experimental researches he made a most widespread reputation.

* * *

We are sure that every reader of The Medical Press of Western New York will be delighted to receive with this number the beautiful portrait of Dr. Thos. F. Rochester which forms its frontispiece. The usually prompt issue for the current month has been somewhat delayed owing to the time taken in its preparation, but we feel convinced that the delay which permits such a beautiful memento will be welcome rather than the reverse.

Society Proceedings.

REPORT OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

Report furnished by courtesy of Dr. W. E. Ford, Utica, N. Y.

The fourth annual meeting of the American Climatological Association, which was held in Baltimore, May 31st and June 1st, demonstrated the fact that a very intense and widespread interest is being taken in the climatic treatment of diseases of the chest. The programme, which embraced twenty-one papers, was begun at 2 P. M., May 31st, by a notable address from the President, Dr. Frank Donaldson, of Baltimore, on prophylactic treatment of those who inherited a predisposition to phthisis. It was well worthy of the occasion and the man. After extensive reference to the literature of the subject, and to the experiments that establish the life history of the bacillus tuberculosis, he asserted that this germ is not directly transmissible. It has never been found in the lung of the fœtus or new-born infant. Numerous experiments upon animals have also demonstrated this fact and also the fact that it is never present in the semen of the male or the ovum of the female. Therefore prophylaxis resolves itself into the prevention of the development of that soil in which the bacillus may find lodgment and may germinate. It has not yet been shown that any germicide can be used to destroy the bacillus after it has begun its destructive process within the human body; the most ardent advocates of that new and valuable treatment by gaseous enemata do not claim that this will destroy the bacillus after it has begun its destructive process. The fact of direct contagion was admitted and statistics noted to prove the proposition. These main points in the paper were carefully elaborated. The discussion showed great unanimity of opinion upon these main points of the paper.

The second paper was by Dr. James R. Leaming, of New York, on the "Philosophy of Climatic Treatment of Diseases of the Chest," which will appear in full in our next issue.

Dr. R. G. Curtin, of Philadelphia, then read a paper on the "Influence of Sea Air on Syphilitic Phthisis." He related six cases in which great benefit had been derived from prolonged ocean voyages. In the discussion which followed the point was made that the climate of the sea coasts, with its fogs and varying winds, differs essentially from that of the open ocean. That the former was known to be deleterious to catarrhal conditions in phthisis, while the latter was not. Dr. Ford, of Utica, mentioned the fact of the self-limitation of syphilis, and argued that after three or four years had elapsed from the time of infection the results, if any remained, would be glandular changes, which in debilitated subjects would behave as glandular degenerations do in strumous subjects, and that there would be no essential difference in the method of production or in the progress of phthisis in these two classes.

Dr. F. C. Shattuck, of Boston, read a very interesting paper on the General Treatment of Phthisis with a special reference to alimentation. His cases were treated in a hospital and the sputum was examined for the bacillus in making the diagnosis, and the treatment consisted in rest and forced alimentation with beef, eggs and milk. Eight cases were reported in which the gain in weight occurring in from two to four months of treatment varied from eight to fifteen pounds without medicines, and practically without stimulants. Many of his patients had remained well.

Dr. Frank Donaldson, Jr., of Baltimore, read an interesting paper showing carefully conducted scientific experiments, and which appears in full in this issue of the MEDICAL PRESS. In the discussion which followed Dr. Whittaker of Cincinnati said he had used the pneumatic cabinet in a large number of cases and had had no accident of heart failure. He had come of late to consider its use as safe in almost any kind of case, though he should certainly hesitate to try cases of well-marked valvular disease of the heart. He had lately been using this method with the inhalation of sulphuretted gas in phthisis instead of gaseous enemata. He thought it a more rational method and believed the results obtained were better.

Dr. E. F. Bruen, of Philadelphia, Professor of Physical Diagnosis, University of Pa., then read a paper on "Gaseous Enemata in Phthisis."

Dr. Bruen introduced the subject of Bergeon's treatment of phthisis by saying that there were two considerations by which the method should be weighed. Does the treatment so act upon the pulmonary tissues that they become unfavorable culture media for the micro-organisms so generally accompanying phthisis? Secondly, Does the gas destroy the bacillus of tuberculosis, or those organisms which are the cause, or at least the marked concomitants of phthisis? A negative answer must, he thought, be returned to the first of these queries. In answer to the second he had, with Dr. O. Shakespeare, carefully examined the sputa without finding any reduction in the number of the bacilli of tuberculosis.

He had obtained results in general in accordance with the preliminary note published April 2d, in the *Medical News* of Philadelphia. These were lessened cough and expectoration, lowered temperature, suspension of night sweats. Temporarily the pulse beat was often reduced fifteen beats, and the temperature lowered from half a degree to one degree during the administration of the gas.

He had treated sixty-two cases in all by this method. In forty-four of these more or less benefit had accrued: four of the cases seemed now in good health. Of these last cases one was published in April in *Medical News*—the other three occurred later, and were cases of consolidation of right upper lobe of lung with commencing softening. In all the other cases the lesions were advanced and cavities had formed—so that the question of cicatrization could scarcely have been considered probable, but all had derived some relief. In fifteen the effect was negative, and three cases died although the treatment had been faithfully applied. The lesions of these last-named cases were advanced. He thought that these cases were most likely to yield good results from Bergeon's treatment in which the catarrhal element was marked. It was his belief that suppuration was very positively influenced, and its results, viz., hectic, sweating, loss of appetite, cough, debility, loss of morale, were all more or less positively modified.

In a word, Bergeon's treatment had become to him a useful mode of therapeusis. He feared that the trouble of giving the gas, and the comparatively limited scope of the treatment, would retard many from using it fairly. "Catching cold" frequently neutralizes the good results of Bergeon's method, therefore suitable climatic environment is very important, and attention to diet a cardinal principle.

He preferred to use an artificial sulphur water, and has obtained best results from a solution of five grains sodium sulphide and five grains sodium chloride in one and one-half pints of water, but he has used two and one-half grains of the salts for some cases, and fifteen grains of each drug for others.

The gas must be *given slowly;* three-fourths hour must be consumed in giving three quarts of it. The nurse must have positive instructions in this matter. The rectum must be empty, and two hours after taking the morning meal and at bed-time are the best seasons for giving the gas. If irritation of the bowels occur, less gas must be given and the amount of sulphide and chloride of sodium lessened. Diarrhœa or chronic peritonitis form contra-indications to the use of the gas. Lately he has used Sharon Spring water with much satisfaction, but he has not found the strong solution as valuable as the weak. The treatment must be continued for a considerable period of time. No bad results from the gas itself had been noted, and patients can readily be taught how to apply the treatment; but its employment must be watched as any other treatment.

In the discussion which followed, Dr. Herbert F. Williams, of New York, said he had searched in the literature upon the subject for an explanation of the theory on which the gaseous enemata have their accredited beneficial action. He had come to a mental conclusion, which he thought had been strengthened by a recent discussion in the New York Academy of Medicine, where Dr. Kinnicutt ascribed some undoubted beneficial results to the carbonic acid gas and not to the sulphuretted hydrogen, and Dr. Williams' theory was based upon the fact that in a case or class of cases incapable or disinclined to take exercise or proper food, we could, by introducing carbonic acid gas into the venous circulation, create, as it were, an extra current in the gaseous analyzing process taking place in the lungs. The atomic weights and combining equivalents of carbon and oxygen were such that if an extra amount of carbon was given by the venous blood it made space for the absorption of an extra amount of oxygen, or at least accelerated the analyzing process. The result would be a more rapid oxygenation of the systemic circulation. Certainly no antiseptic effect *per se* could be claimed for the hydrogen or the gas; for they exist in large quantities in the cavities of the body, and despite this fact cholera, yellow fever, etc., are rampant.

Many consumptive patients are not suffering from a supersaturation of carbonic acid, for it remains innocuous in the venous circulation. They more frequently need a treatment that will judiciously provide them a means to create a circulation in both the aerial and sanguineous currents, and hence a more frequent and rapid oxygenation.

Dr. Whittaker, of Cincinnati, had been using the gas in all upon thirty patients. He first used it per rectum, but in the last fifteen cases he had exhibited it by inhalation in connection with the pneumatic cabinet, with equally good results. He found that he could control night-sweats, coughs and fever just as well, if not better, and certainly in a less objectionable manner than by the rectum. He was aware of the fact of the absolute inability of carbonic gas or sulphuretted hydrogen to destroy the bacillus of tuberculosis, or even the bacilli of putrefaction; but there were other and equally important therapeutic indications to be met, and which seemed to be met by the gaseous inhalation, and the pyæmic process was the most important. He found no difficulty in giving the gas, but it was necessary to give it with a good admixture of air in the breathing-tube in the cabinet.

Dr. S. S. Cohen, of Philadelphia, said he had had a fair personal experience with the administration of gaseous enemata, and has had the opportunity of seeing a large number of patients in the hospital and private practice of Dr. J. Solis Cohen. Their experience differed somewhat from that of Dr. Bruen.

He had seen no cures, nor does he look upon the measure as curative. A case of phthisis cannot be called cured unless the patient has remained well for at least four years.

Gratifying palliative results have been secure as shown by diminution of fever, often rapid and marked promotion of sleep, increase of appetite and diminution of cough and expectoration. In all cases there had been some good results. He had use water richer in hydrogen sulphide than that employed by Dr. Bruen. Unless the reaction by plumbic acetate or a decided sulphuretted hydrogen odor was obtained in the breath he was never satisfied. Recently he had used a formula suggested by a French physician, whose name he could not recall, in which 10 c. c. of each of the following solutions is added to 200 grammes of distilled water: No. 1, sodic sulphide 10 grms., distilled water 100 c. c. No. 2, acid salicylic 1 grm., tartaric acid 25 grms. to distilled water 100 c. c. The gas is warmed in its introduction by surrounding the wash bottle with a vessel of hot water. Injections are made very slowly, and are given twice daily, just before breakfast and three hours after supper. The cases where it is applicable are those of threatening or beginning softening, or where softening has not too far advanced.

One of the most notable papers of the session was read by Dr. A. L. Loomis, of New York, on "Evergreen Forests as a Therapeutic Agent in Pulmonary Phthisis." Admitting the clinical fact that phthisical patients were benefited by prolonged residence in evergreen forests, he mentioned as an explanation three main theories that have been advanced. First, that terebinthinate inhalations had a direct effect upon catarrhal inflammations. Second, that electrical changes were produced in the atmosphere by the friction of air in motion against the needles of the pines. Third, that the change in the chemical composition of the air itself is due to the action of terebinthinate exudations producing a per oxide of hydrogen resembling ozone. This air was aseptic, and it was doubtful if we should ever be able to go farther and produce any atmosphere that would be antiseptic.

Another contribution of great value was that of Dr. E. L. Trudeau, of Saranac Lake, on "Environment in its Relation to the Progress of Bacterial Invasion of Tuberculosis." He had conducted a series of original investigations which are of the utmost importance. Five healthy rabbits were each injected in the right lung with culture fluid containing the bacillus tuberculosis. They were then confined in a dark cellar in close quarters and sparingly fed. Four of them died of phthisis, and the fifth being killed at the end of four months was found to have well developed tubercles in various parts of the body. Five other healthy rabbits were confined in a hole ten feet under ground, were given but little food, and were not taken out for four months, when they were found to be extremely thin and weak, but when killed furnished no sign of tuberculous deposit in any organ. These had not been injected. The third series of five healthy rabbits were all injected in a manner similar to the first series and were turned loose on an island in a lake where there were no other rabbits, and where their surroundings were healthful. They were liberally fed for four months, and were then killed. All excepting one was in perfect health, their tissues firm and no tuberculous deposits could be found. The fifth one was found to have developed phthisis. Dr. Trudeau's methods were detailed and were above criticism. The paper called forth many expressions of appreciation of its value, because of the care taken in the experiments and the obvious bearing of the study on the invasion of tuberculosis.

Two elegant receptions were given to the members of the association; one by the President, Dr. Donaldson, and one by Dr. Van Biber. The session ended in a banquet at the Runert House, June 5. Dr. A. L. Loomis, of New York, was made President for the ensuing year, when the association will meet in Washington in connection with the Association of American Physicians. F.

ERIE COUNTY MEDICAL SOCIETY.

Special Memorial Meeting, May 25, 1887.

This was a special meeting called for the purpose of taking appropriate action concerning the death of Dr. Thomas F. Rochester. The notice of meeting was issued hastily, and some were kept away by press of work or engagements, but it was remarkably well attended, and the universal sentiment as of a domestic affliction, which appeared in every remark that was uttered, was a most glowing tribute to the noble character and virtues of him whose loss they mourned.

Dr. J. D. Hill presided, and in calling the meeting to order made a few appropriate remarks.

Drs. Charles Cary, J. B. Andrews and John T. Cronyn were then appointed a committee to prepare a suitable memorial, and during their absence the meeting was thrown open to such members as desired to give expression to their personal feelings concerning the departure of their distinguished co-worker.

Dr. F. W. Abbott eulogized his late neighbor as a man exemplifying in the most perfect manner the principles of hospitality and Christianity as applied to every-day life. Although a great lover of music, literature and art, he never allowed his enjoyments to interfere in any degree with his professional duties. His devotion to his patients was almost proverbial. The speaker knew of an instance where for twenty-one successive days the deceased visited one who was under his professional care from one to four times per night. He possessed the remarkable faculty of being able to lie down and pass into deep sleep instantaneously.

Dr. George N. Burwell, who was the medical adviser of Dr. Rochester in his last illness, expressed himself as follows:

> I come to-night, my friends and brethren of the society, to mourn with you the loss of our friend and associate, Dr. Rochester, as well as to add to your tributes of high and most merited praise the humble assurance of my affection and admiration.
>
> During all his professional life in Buffalo we have worked side by side, always, I am most happy to say, in good understanding, and therefore always in peace and most perfect harmony. He was the younger of the two and the one perhaps the most ambitious, certainly the better worker and the most of the man of affairs. So to a certain extent we have worked on different lines but never at cross-purposes. His push and energy have always claimed and have had warm admiration, and his prosperity and great reputation and resources have been always to me, as a citizen of Buffalo, objects of honest pride. I therefore do most sincerely mourn his death as a public loss to our city; and to the gentlemen associated with him in many and various ways it must be almost a calamity.
>
> To myself, let me say, it is an irreparable loss, for it takes from me the one most dear to me, and alas, almost the last one of the associates of my early medical life. His place, his esteem, his friendship which I have ever so highly valued, can never be made good to me, and I mourn him as one who is without hope.

Dr. Lucien Howe said that this was an occasion where the heart, however full, was in no danger of finding expression in terms of too extravagant praise. The speaker had taken occasion to look back through fourteen volumes of the *Buffalo Medical Journal* and had found therein nineteen articles contributed by Dr. Rochester, showing something of his industry as a writer. As a teacher he had been brought into contact with from 3,000 to 4,000 medical students at the college, and had been of measureless value in training these for their work. He was preëminent as a practitioner. The speaker closed with the expression of a wish that the medical profession could give to Dr. Rochester some more conspicuous memorial than the simple records of a short meeting.

The committee then returned and reported the memorial which appeared upon the editorial pages of our last issue.

In seconding their adoption Dr. Mann made the following remarks:

There are others here to-night who can speak of Dr. Rochester from longer and perhaps more intimate acquaintance than I, but none, I am sure, with more sincere admiration and affection. Although my acquaintance only lasted for five short years, I feel as if I had known him for a lifetime, and to know was but to admire and to love. Truly, a great man has gone; great in many ways, but especially in all those noble qualities of soul and mind which most endear to us our friends. It is rather in this connection that I would speak of Dr. Rochester to-night. I leave to others the pleasant task of dilating on his marked abilities as a teacher; of these, unfortunately, I know only from the enthusiastic reports of his pupils. Others may speak of him as the public-spirited citizen, always ready to help in any enterprise which seemed likely to inure to the public benefit. But as a friend, how good and true he was! How self-sacrificing; how willing to bear burdens which did not belong to him; how generous, almost to a fault; how cheerfully he listened to our story, and with what care he gave his advice!

He was sensitive and quick, it is true; but more quick to resent an injury to a friend than to himself. But even though impulsive, how soon it was over; and then no one so ready to forgive and forget. There was no malice or uncharitableness in his heart. Dr. Rochester's generosity was one of his most noble qualities. No one who had any claim on his friendship could ask in vain. He was full of sympathy, and we shall never know one-half the good deeds he did, for he never believed in letting the right hand know what the left hand was doing.

In his professional relations he devoted himself to his patients, both as friend and healer, working often without hope of remuneration, long after his strength was exhausted, and he needed rest and care even more than those he was attending; so self-sacrificing was he,—so true to his sense of duty.

Whence came these high qualities which we admire so much and which made us love him? They were partly inborn and partly the product of a noble Christian character, from seeking to follow the example of his Master in going about doing good. Surely it can be said of him, if of any one, that he was a follower of the

Christ, a Christian in the fullest sense of the word, and as such a pattern for us all.

What more shall I say? I might speak of the beautiful way in which he bore his illness, never complaining or bemoaning his fate, though often his sufferings were great. I might tell you, from the glimpses I have had, of the lovely relations which he maintained with his family, of his devotion and fatherly care.

Of his position in the profession, you all know how he stood *facile princeps*. You know the strength of intellect, the broad learning which gave him a national reputation; the clear judgment, which made his advice so eagerly sought in the sick-room; his preëminent honesty and uprightness, which made his opinion of so much value. All these points stand prominently out as we gaze on the picture of his lfe, too soon completed, and will serve to keep his memory ever fresh in our minds and make for him a monument more enduring than brass.

Dr. Potter had known the the deceased for over a third of a century, having made his acquaintance in 1854. He had known him as a pupil, a friend and a neighbor, and found him an ideal man in each.

A letter from Dr. Pryor was read, in which the writer gave fervent expression to deep admiration for the departed.

Dr. Strong spoke of the splendid work of charity performed by Dr. Rochester at the General Hospital, where for so many years he served without any remuneration. Moreover, he several times saved this institution from oblivion by a personal appeal to his wealthy friends to give the beneficent work their financial support.

Dr. Roswell Park said that one of the best indications of the standing of the distinguished physician in the community was found in the fact that the local press referred to his death as a public calamity. He felt a profound sense of personal loss, because from the time he first became a member of the faculty of the Buffalo Medical College Dr. Rochester had been his best friend.

Dr. Samo said that there was something about the very physique of Dr. Rochester which bespoke the magnitude of his character. He had gone to join Flint, Hamilton and White.

Dr. Putnam extolled the deceased for his willingness to give counsel to the younger physicians, thus aiding them to retain the confidence of their patients.

Drs. Bartlett, Wyckoff, Green and Stoddard likewise spoke, each paying a warm tribute to the memory of their deceased contemporary.

A resolution was then passed to the effect that the Erie County Medical Society attend the funeral of Dr. Rochester, at Trinity Church, in a body.

Book Reviews.

AN INTRODUCTION TO PRACTICAL BACTERIOLOGY. A guide for students and general practitioners. By Thomas E. Satterthwaite, M. D. Detroit: Geo. S. Davis. 1887.

This number of the Physician's Leisure Library is, indeed, a mere introduction to practical bacteriology, and too short at that. At first sight it appears to be only an illustrated descriptive catalogue of instruments and appliances, this portion making up about half the little volume. Still the introductory chapter, though brief, gives a good *résume* of germ theories. The chapters on Methods of Examination, Culture Methods and Methods of Investigating Special Bacteria are certainly too brief for the student. The many references to standard works are, however, a redeeming feature. As the author says: "The technique of this kind of work is peculiarly difficult, even for one who is versed in ordinary laboratory methods." No physician can afford to be ignorant of the principles of bacteriological work, but those who wish to do real work and help to unravel the mysteries of this most promising department of medicine should *by all means* take a special course or courses of instruction in some good laboratory.

MEDICAL ELECTRICITY: A PRACTICAL TREATISE ON THE APPLICATIONS OF ELECTRICITY TO MEDICINE AND SURGERY. By Roberts Bartholow, M. D., LL. D. Third edition. Pp. 304. Philadelphia: Lea Bros. & Co. 1887.

That Prof. Bartholow's admirable treatise on electricity should have so quickly reached a third edition is the best testimonial to its worth. The work is essentially one for the student and that class of practitioners whose knowledge of the uses of electricity is so vague that they use their batteries indiscriminately and unscientifically on their patients, in the hope that sometimes they may accomplish good. Prof. Bartholow describes in his clear style the various forms of electricity and the batteries for medical use. Part II. consists of an extremely comprehensive description of electro-physiology. The subjects, "Electro-Therapeutics," "Electricity in Surgery," and "Thermo-Electricity," are handled in the author's graphic and intelligent style. The book differs, by its very simplicity, from the more elaborate text-books and treatises on electricity, and as such deserves an extensive sale.

DRUG ERUPTIONS. A Clinical Study of Irritant Effects of Drugs upon the Skin. By Prince A. Morrow, A. M., M. D. Pp. 199. New York: Wm. Wood & Co. 1887. Buffalo: J. H. Matteson.

The abnormal phases of drug action have as yet received by no means all the attention they deserve. If they had no other interest, the fact that the dermal lesions caused by drugs, in patients of certain idiosyncrasies, are often mistaken for symptoms of the eruptive fevers would give them not a little importance. Hence this book has a place in literature, and a place which was hitherto vacant so far as American authorship is concerned. To be sure, the book of Lewin has been translated, but it is not so comprehensive as the monograph of Dr. Morrow. The book makes no pretentions to entire originality. It falls to the lot of no one man to see enough of these peculiar cases upon which to base a treatise. It is rather a choice culling of items of interest from a very large number of sources, and the judicious arrangement of so much matter, with a proper commentary, is in many respects a more difficult task than to simply describe what one has himself seen. Dr. Morrow has accomplished his task most creditably. Not the least valuable feature is the description of suitable tests for the detection of various drugs in the urine. These can not fail to be of value from a diagnostic point of view. Full acknowledgment of the observations and records of others is made. A handsome colored plate makes an attractive and valuable frontispiece for the little volume, for which we bespeak earnest study.

A TREATISE ON DIPHTHERIA, INCLUDING CROUP, TRACHEOTOMY AND INTUBATION. By A. Sanné; translated, annotated and enlarged by H. Z. Gill, M. D., LL. D. Pp. 656. St. Louis: J. H. Chambers. 1887.

Since the time of Bretonneau men have not ceased to study this dread disease, nor have any of its aspects of late been neglected. A malady whose death-rate through the United States is, according to the census returns, about fifty to the thousand of deaths from all causes, deserves the most serious study. And yet Jacobi could say of it: "If the history of any disease is interesting, and the neglect of its study has ever punished itself, it is diphtheria." The matter of the identity or non-identity of croup and diphtheria is even yet vigorously discussed by some, though almost everything indicates the latter. The disease has spread rather than diminished in the meantime; new facts have been constantly accumulated. All these observations must be collected and compared by some one fit for the task, if we are to make positive advance, and Dr. Sanné seems to have shown himself the right man for the work. Aside from his literary studies he has been able to base his work upon a study of some fifteen hundred cases in private and hospital practice, and thus to prepare the latest and probably the best work on the subject. It is, moreover, refreshing to hear a presentation of the pathological side of the matter from a man not steeped in German notions, but who can yet do justice to them.

A very excellent chapter on the surgical anatomy of the neck has been placed first by the American editor, taken largely, with due acknowledgment, from the writings of Dr. Pilcher, of Brooklyn. Then an interesting history of the disease, prepared at the expense of a large amount of time. Next follow thirty pages devoted to the pathological anatomy. After this the bulk of the large volume is devoted to the consideration of the ordinary and extraordinary features of the disease. Nearly a hundred pages are devoted to the surgical treatment of the disease, and the American editor has very wisely added an account of O'Dwyer's operation of intubation. Not the least interesting feature is the space devoted to the sequences of tracheotomy and its complications. The statistics given are copious. He describes the slow operation, the rapid one of Chassaignac, and most of the others, except Martin's, which he alludes to in one line. This latter is, in our estimation, the one which ought to be taught to students and young practitioners, since it can be done without the ordinary tube in cases of emergency.

Altogether the book is a most valuable cyclopædia concerning that of which it treats. Dr. Gill has performed his difficult task of translation and editing in a manner that can give only satisfaction. The illustrations and the type might be better; but a little defect in this direction can in no wise detract from the great value of the text. Our only unfavorable comment on the original is that it is difficult to come quickly upon the author's meaning; one dislikes to have to read over page after page in order to find what he really thinks concerning a given treatment, or what ground he takes in certain mooted pathological questions.

ANÆMIA. By Frederick P. Henry, M. D. Pp. 136. Philadelphia: P. Blakiston Son & Co.; Buffaio: Peter Paul & Bro. 1887.

A most entertaining little monograph on the subject of anæmia and its several varieties, collected from different issues of *The Polyclinic* where it has appeared in serial form. It embodies the results of many years' study of the blood and the disorders due to its imperfect elaboration. It is comprehensive enough to innlude anæmia of puberty or chlorosis, anæmia lymphatica or Hodgkin's disease, leucocythæmia, anæmia splenica or the splenic form of leukæmia which is usually completely ignored in the text-books, pernicious anæmia, secondary anæmia, toxanæmia, and finally anæmia of parasitic origin.

It is the first systematic treatise on anæmia published in this country, and is at the same time condensed and comprehensive. It shows the results of earnest study and speaks well both for the diligence of the author and the good taste of the publishers. It is issued in very attractive form at the price of seventy-five cents, and can be commended to all.

A TEXT-BOOK IN PATHOLOGY AND PATHOGENESIS. By Ernst Ziegler. Translated and edited for English students by Donald MacAllister, M. D. Three parts in one vol. Pp. 1091. New York: William Wood & Co. 1887. Buffalo: J. H. Matteson.

This, now famous work has reached its fifth edition in as many years, and has met with an amount of favor as deserved as it is yet remarkable. Beginning it as a revision of Fœrster's great work the author soon found it necessary to abandon all attempt to make over another's efforts, and consequently undertook it as a separate and distinct treatise. With what favor he has met, its rapid strides in popular esteem well show. It stands to-day the best manual of its kind in any language. It has, moreover, lost nothing by a rendition into English, since its translator and editor has very judiciously added here and there a note, a comment or a reference which add not a little to its value.

The work has already appeared in three volumes in different issues of Wood's Library, and we note with the greatest pleasure that the publishers have issued it now in distinct and separate form, in one volume, so that all who desire it may easily procure it. It should be not only in the library but on the desk of every medical man, so that he may make daily reference to its pages.

A PRACTICAL TREATISE ON DISEASES OF THE EYE. By Dr. Édouard Meyer, Prof. á L'École Pratique de la Faculté de Médicine de Paris. Translated by Freeland Fergus, M. B., with colored plates and 267 engavings on wood. Philadelphia: P. Blakiston, Son & Co. 1887. Buffalo: Peter Paul & Bro.

If the fact that a work is deemed worthy of translation is a testimonial of its value, then this work must rank very high, since it has been translated into seven different languages, including Russian and Japanese. And after a careful examination of its contents we judge that it has not found unmerited favor. Conciseness and comprehensiveness are its strong points, which, when combined with accuracy, will ensure success to any book. It has been adorned with three fine colored reproductions from Liebreich's classical atlas, beside which are found numerous wood-cuts with the doubly welcome features of correctness and freshness. The classification followed is the anatomical one; the symptomatology and treatment are not obscured by minutiæ of pathological features. Operations are plainly described, and the reader is taught what accidents to look out for, what precautions to observe both prior to and after operating. Full attention is paid to the difficult and usually neglected part of errors of accommodation and conveyance,—in our opinion the most important and least studied portion of ophthalmology.

We should have been pleased to see a little more familiarity with, or at least recognition of the work of American surgeons, yet the book reflects its author's views and practises, and that is the most important feature. Those who desire a summary of French notions on ophthalmological topics will find this less cumbersome and more practical than Wecker and Landolt's encyclopædic treatise, more recent than Galezowski's, and in every way a reliable, entertaining and satisfying work. It well deserves to be made a text-book in our American s chools.

A PRACTICAL TREATISE ON RENAL DISEASE AND URINARY ANALYSIS. By William Henry Porter, M. D. Pp. 349; with one hundred illustrations. New York: William Wood & Co. 1887. Buffalo: J. H. Matteson.

The writer of this work has been so long identified with special study of renal affections that he is entitled to recognition as an authority. And inasmuch as he speaks from experience gained not only clinically but experimentally his opinions are the more valuable. We are glad to note that the basis of his work is the normal physiological action of the kidney, and that every departure from this standard is followed in the order assumed by the morbid changes. This is, of course, the only rational method, but it is too often neglected. The pathological significance of various urinary products is fully discussed, and in a more satisfying way than in any treatise we have ever read. Such sentences as the following are pregnant with suggestion, and may well be committed to memory: "It is a firm conviction, based upon an extended necropsy study, that in all the acute diseases the hight of the attack and the prognosis rest almost exclusively upon the minute changes in the hepatic and renal epithelial cells. When this fact is more generally accepted and acted upon, the mortality in connection with all acute and severe diseases and after severe surgical operations will be diminished, other things being equal. The greatest antipyretic will be that drug or that plan of treatment which will prevent retrograde metamorphosis of the hepatic and renal epithelial cells and sustain their nutrition and eliminate activity." This paragraph is clumsily constructed, as are many in the book, but its truth is incontestable.

The book is throughout most instructive and suggestive; its slight defects may be readily ignored.

A TREATISE ON DISEASES OF THE SKIN, WITH SPECIAL REFERENCE TO THEIR DIAGNOSIS AND TREATMENT, INCLUDING AN ANALYSIS OF ELEVEN HUNDRED CONSECUTIVE CASES. By Prof. F. M'Call Anderson. Pp. 662. Philadelphia: P. Blakiston, Son & Co. 1887. Buffalo: Peter Paul & Bro.

From the frequent citation and numerous comparative tables constructed, bringing out into relief the broad distinction of cutaneous maladies which so often show resemblance, laying especial stress on the importance of an accurate diagnosis, and, again, from the unusual care exercised by intelligently stating the indications afforded, and the methods to be adopted in treatment, and, furthermore, from the careful selection of useful formulas found disseminated throughout the text, the object of this work, as the author sets forth in his preface, "that it will in some measure at least supply to the student and to the practitioner a reliable guide to the diagnosis and treatment of a most important branch of medicine," has in fact been most admirably accomplished. The classification followed by Prof. Anderson is a modification of the one adopted for many years at the Glasgow Hospital for Skin Diseases, and is based upon peculiarities, both of a pathological and etiological nature. Considerable space and special attention is justly devoted to the consideration of eczema, which, in its manifold forms, is by far the most important of the different groups of diseases embraced in this classification. The author asserts that the combined statistics of a hospital and private practice of 30,909 cases show 7,997 of eczema, or more than one in every four. It embodies the results of his large clinical experience in the study and treatment of this common malady, endorsing in the main the views of other observers equally experienced in the same field. The work concludes with a brief description of the eruptive fevers, giving a rather full account of their differential diagnosis. As a literary production, it reflects great credit upon the industry and scholarly attainments of its author. In short, it is a most creditable contribution to dermatalogical literature. It is both interesting and instructive, admirable as a model in diagnosis and sound as a guide for rational and successful treatment. Enriched with colored plates, the work is elegantly printed on good paper and contains a number of well executed new wood-cuts.

CLINICAL MANUAL FOR THE STUDY OF MEDICAL CASES. Edited by James Finlayson, M. D. Second edition; 12 mo.; pp. 683. Philadelphia: Lea Brothers & Co. 1886.

We learn from the preface of this book that it is "designed to afford such assistance as students actually working at clinical medicine may require." The work is written by several distinguished contributors, and a list of their names would alone be an assurance of the realization of the modest hope expressed in the preface. A careful perusal of the various chapters shows that their authors have in no way underrated the work to be accomplished, and have spared no pains in the completion of the task. The opening chapter, "On the Physiognomy of Disease," is at once comprehensive and concise, and logical arrangement, clear statement and graceful diction combine to transform a multitude of details into a true clinical picture. An entire chapter is given to the description of electrical instruments used in diagnosis and their mode of employment. The explanations of electrical technology are plain and brief, and are well suited to the requirements of the busy practitioner. The chapter on insanity is one of special excellence and forms one of the most readable portions of the book. Special articles on methods of examining the fauces, larynx and nares, on female disorders, and the physical examination of the chest and abdomen fully sustain the high reputations of their authors. Indeed, this manual, as a whole, is one of those rare contributions to medical literature whose perusal is finished with a feeling of regret that it is so brief. The habit of reading too exclusively works devoted to the description of special diseases tends somewhat to cripple one's diagnostic powers; for, in such works, the mind is led from the disease to symptoms, while in diagnosis one must pass from symptoms to the disease. The practical value of this manual is certain to demand recognition from the medical profession, and will render it a valuable acquisition to the students of every branch of clinical medicine.

BOOKS RECEIVED.

From P. Blakiston, Son & Co., Philadelphia, through Peter Paul & Bro.:
Diseases of the Eye: MEYER and FERGUS.
Anæmia: F. P. HENRY.

From Wm. Wood & Co., New York, through J. H. Matteson:
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Companion to the U. S. Pharmacopœia, 2d ed: OLDBERG and WAHL.
Text-Book of Pathology and Pathogenesis: ERNST ZIEGLER.

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THE PHILOSOPHY OF CLIMATIC TREATMENT OF CHEST DISEASES.

By James R. Leaming, M. D.
New York.

[Read before the American Climatological Association.]

The aphorism of Cullen that the air of any place is better for the patient than that in which he grew ill, is born of experience. It suggests *change* in pursuit of places of greater salubrity than are at present enjoyed, and thus stimulates the imagination of the poor invalid to dream of some Elysium, somewhere upon earth, where lost health and strength might surely be restored and the delightful sense of recuperation enjoyed.

The earliest health resorts were probably to springs and fountains to which miraculous cures were ascribed; especially if they emitted gas or spouted out of the rocks, or were hot or smelled of sulphur; then they were believed to be the abode of spirits which gave them healing efficacy. Every nation had its sacred waters, like the Ganges, the Jordan, or the Pool of Siloam. The Greeks and Romans built temples to Hygeia upon hills near such inspired springs and fountains.

During the middle ages oriental merchants carried, not alone talismans of precious stones, but also sealed bottles of sacred water and precious healing wines. Even at the present day water is brought in this way from the Jordan for the sacred purpose of baptism. In this way localities became famous for cures, and pilgrimages were made to distant parts of the then known world, and changes of scene and air with applied faith assisted in restoring the feeble to health.

But it was not until 1820, when the history of the now classic tours of Sir James Clark to the different popular health resorts of

Europe was published, that the profession began to collect statistics of the temperature and moisture and their comparative sanitary effects, for the scientific guidance of the sick. Since then, sheltered spots among the Alps, at Ems, Pau, Nice, Mentone, in Greece, Egypt, and Algiers and other places, have retained their early reputation and are to-day among the most frequented.

The history of the western hemisphere in regard to health resorts is but a repetition of that of the East. Springs and fountains, thermal, sulphurous, saline and gaseous, were known to the Indians before the advent of Europeans, as charmed waters. They were equally believed in by the early setttlers as cures for special diseases, but, as in the East, it was soon found that, mostly, where the resort was in virgin forests of pines, or over deep, sandy soil, in sheltered places, upon hills or mountains, weak and diseased lungs receive strength and recuperation. Canada, New England, the Middle States, the Carolinas, Georgia and Florida, furnish these requisites fully near the Atlantic coast; while California, Texas, New Mexico, Colorado, Minnesota and Manitoba afford even a wider range upon the western. Each has its peculiar advantages, and all afford, with the mountains in the interior, selections for the happiest changes.

The predilections of patients and physicians are generally for a change to warmer climates, and, other things being equal, it may be best to go where out-door exercise can be enjoyed and the cold and damp of northern winters be avoided. But there are many exceptions to this rule; dry, cold, equable air is many times curative. It seems paradoxical, simply because our preconceived ideas are not of experience. But all these facts merely emphasize the law of change, which is the law of nature. We see it in the varying seasons, day and night, and in the recurrence of heat and cold. It has been observed, too, that the greatest improvement in health takes place during the first two or three weeks of sojourn in a new place. Bearing this clinical fact in mind, and by methodizing and combining a system of changes from inland to sea, from the sea inland, from north to south, from south to north, from the valleys to the mountains, from the mountains to the valleys, keeping pace with the march of the seasons, like birds of passage, it has been proposed to establish health resorts at convenient distances, with graduated changes, commencing at the north in the early summer, and going south, stopping at each resort for a few weeks only, and leaving as soon as the freshness of the new place has worn off, for the next in the course, thus getting into a warm climate in the winter and returning back home in the spring. The same would be done upon the Pacific coast, or on the central rocky ridge of mountains and table lands, always taking advantage of especial conditions of soil, forests, fountains and springs.

To those subject to winter coughs, a sail in the autumn to Bermuda, thence to the different groups of West India Islands, returning along the coast of South America, lingering at Trinidad and Caracas, and reaching home after the winds and frosts of winter have passed, may be singularly effectual.

The natural health resorts upon the western continent are unsurpassed in excellence and variety; yet, for a very large number, the old world always will afford attractions which increase tenfold the natural advantages. Tradition, history, poetry and fable combine to fill the mind with joyful anticipations in visiting scenes of the world's past history, producing a state of mind conducive to recuperation. All of these schemes are available for those who have incomes sufficient to adopt the system of changes which is more curative than to spend the whole time in any one locality, no matter how salubrious; and will avoid crowding, than which nothing is more injurious to those with diseases of the lungs. But to a large number in every city or community, such delightful methods are beyond their means.

The laborers, mechanics and skilled artizans of a country form the great body of its producers. Their welfare becomes a question of state policy. Their labor is the chief element in the wealth of a nation, yet individually they are frequently improvident and they are particularly liable to chest diseases. They have a full knowledge of their importance as members of the body politic and of the inequality of their position and the evil tendencies of this knowledge has been mischievously stimulated to law-breaking and self-injury by the bad teachings of self-imposed leaders. Could these people be made to feel that the state regards their true interest with intelligent and kindly solicitude, it would go a great way to quiet turbulent risings of dissatisfaction among them. It is true that this rebellious element is altogether un-American, and is the result of ignorance of the principles of a representative form of government,—that all the people form the state. Yet, notwithstanding, it exists in cities and communities of miners and manufacturers, and must remain so until greater homogeneity shall have been acquired by admixture with the native element. In no other way can these people be more speedily brought under these educating influences, than by the establishment of well regulated sanitariums, which they must learn to know are under the government of the people of which they are a part; then they will appreciate their interest in these means for the most successful treatment of the deadly diseases to which they and their families by heredity and acquirement are so liable.

The existing establishment of parks and dispensaries in cities has, in part, supplied this want. The parks are breathing places as well as pleasure grounds and furnish limited climatic treatment of chest diseases. A ride through the parks will demonstrate the fact that they are practically used by the poor as well as the rich in this way.

A sanitary park at some convenient distance from a population center, chosen on account of its soil, springs and running water, covered with evergreen trees, could be set apart for a health resort, in which an educational sanitarium could be built, with gymnasiums and baths, and rooms with medicated atmospheres, and applied methods, such as the pneumatic differentiator, for expanding the chest, interpulmonic and gaseous rectal injections, and for other methods of overcoming pulmonary disabilities. Both the park and the sanitarium should be under medical police of the most intelligent professional skill, and should be placed within the means and reach of all. The subject is of immense importance and is entirely feasible.

Lord Bacon, the greatest genius of all time, as well as the most practical of philosophers, in that wonderful fragment, the New Atlantis, imagines a state in the New World, perhaps a vision of the future of the United States, in which the laws and customs are brought to great perfection; conducing to a wonderful state of happiness and the physical and mental welfare of its people. In the city of "Bensalem" was an institution for the advancement of all knowledge pertaining to the sciences and the physical welfare of mankind, called "Solomon's House" (a kind of Johns Hopkins University?), and including a sanitarium.

One of the wise men of "Bensalem" in describing it says, "We have, also, certain chambers which we call 'Chambers of Health,' where we qualify the air, as we think good and proper for the cure of divers diseases and preservation of health."

This quotation contains, as far as I know, the earliest suggestion from authority for a sanitarium where scientfic methods for the treatment and cure of respiratory diseases could be thoroughly carried out. Scattered over our vast country are many localities fitted by nature for sanitary parks. The New Jersey coast from New York harbor to Cape May may be selected for illustration. There are many other localities of equal, perhaps of greater, advantages. But this has deep sandy soil, and there are still thick forests of pine woods covering portions of it. These are growing less every year, and unless there shall be a combined effort to preserve them, will soon have passed away. This region is already known as a good health resort. If in addition to the present forests, groves of evergreens could be planted and sanitary parks set apart, each with a central sanitarium or "Solomon's House," not expensively built, but roomy and convenient, with cottages or tents scattered throughout the whole extent, for the temporary occupancy of families having members suffering with pulmonary diseases, what grand "Sanitaria" would we have!

The scientific management and treatment could be carried out on a grand scale and definite results could be obtained. The crucial test could be applied to theories, and vaunted methods of treatment could be tried and their true value ascertained.

This would necessarily lead us to study the true philosophy of treatment, and to learn *what it is* which benefits, and to apply this principle in all cases with unvarying success. Horseback-riding from the earlier times has been, and still is, generally regarded as beneficial for weak lungs. What is it which benefits in this exercise? The patient who is much in the saddle will learn by experience to choose the gait of the horse most beneficial and comfortable. The fast walk for invalids in most cases will be selected, so that with the exhilarating effect upon the mind of this method of locomotion there is the equalized exercise, always gentle, of every part of the body. But, more than all, as the horse steps long, in walking fast, the rider holds his breath, or breathes slowly in order to balance himself, and thus is gained without fatigue the indispensable condition for improvement,—gentle, continual expansion of the lungs, and, of course, of the chest.

Those who are benefited by going to sea, and many are, must be constantly on deck. On deck they hold in the breath, or breathe slowly in order to balance themselves, and in this way efficiently expand the chest and the lungs. They had better have remained on shore than to keep in the state-rooms. What do we instinctively do on entering the pine woods but take in full inspirations and exclaim: "How delightful!" We instantly breathe more slowly and more fully, and natural expansion of the chest results. This is the chief benefit in every method of treatment,—gentle, continual, natural expansion of the lungs and of the chest. It must be gentle, natural, continual. Natural, healthful, unhurried respirations are about sixteen times in a minute. A person with a weak chest, long before he, or his friend, considers himself a patient, will increase the frequency of his respirations. He breathes frequently to make up for the lack of natural full inspiration. To get strong he must go back to the normal frequency and fullness of respirations. It is better not to do it with violence or until fatigued, and it will only become entirely successful when it has become the natural habit. And this is the true philosophy of climatic or any other successful treatment of diseases of the lungs. The blood is sent to the lungs for aëration. Unless the lungs are expanded so that every capillary in the true respiratory system is unobstructed, this will not be accomplished.

Local stasis in the true respiratory system is the visible, tangible beginning of pathological results within the lungs, whether tubercular, fibroid, or catarrhal. Not the only, but the essential benefit of climatic treatment is re-forming and keeping the habit of natural breathing. The poor cannot leave their homes nor intermit their daily labor. To them accessible sanitary parks with sanitariums and dispensaries are a necessity. There they can be taught to reform the habit of too frequent breathing. I know practically, that this can be done, even in a great city, in which the air is loaded with disease germs.

In a professional life now extended beyond the average in time, there is nothing of which I have become more certain than that even under the worst circumstances of air and locality, consumption may always be prevented by proper food, chest expansion and exercise, and, with few exceptions, the same means will arrest it in the commencement and remove the results. Consumption is a preventible disease. The methods should be taught in the schools and families, in sanitary parks and in places of amusement. And this brings us to consider the most prolific cause in the etiology of phthisis: Depression of the organic life from emotional causes, such as fear, anxiety, worry, sorrow or despair; increasing the number of white globules of the blood, and preventing the natural remedy of sufficient aëration by full inspiration.

A condition of hyperplasticity and stasis gives occasion for plastic exudation through the delicate coats of the capillaries upon pleural or other serous surfaces, or into cellular connective tissues, and which, organizing into psuedo-membranes of low vitality, forms pathological products with necrotic tendencies. The emotions are subject to education; courage, especially, by function. A calm contemplation of the end of life which is common to us all, as Bacon says, and therefore cannot be so dreadful, enables us to live longer and with greater mental efficiency. We should live, as Bryant says, so that when our summons comes, we go, not like the "quarry-slave," "scourged to his dungeon," but "like one who wraps the drapery of his couch about him and lies down to pleasant dreams."

Byron makes poetic use of the fable of the scorpion surrounded by fire stinging itself to death; an act, not as the great poet supposes of heroism, but of cowardice. He, himself, dying at the early age of thirty-six from Bright's disease, was as clearly a suicide from the indulgence of ungoverned emotions, increasing the plasticity of his blood, as if he had ended his life with a bullet.

In *Measure for Measure*, the Duke, entering a room in the prison distinguished as a friar, says:

"So then you hope of pardon from Lord Angelo?"
Claudio. "The miserable have no other medicine, but only hope.
I hope to live, and am prepared to die."
Duke. "Be absolute for death"; [that is, meet death
resolutely] "either death, or life,
Shall thereby be the sweeter. Reason thus with life:—
If I do lose thee, I do lose a thing
That none but fools would keep; a breath thou art,
Servile to all the skyey influences,
That do(th) this habitation, where thou keep'st,
Hourly afflict. Merely, thou art death's fool;
For him thou labor'st by thy flight to shun,
And yet run'st toward him still."

PNEUMONIA OF THE AGED.

BY J. H PRYOR, M D.
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[Read before the Physicians' Club, April 8, 1887.]

For a long time authorities have recognized and described the essential differences between pneumonia in the aged and pneumonia of the aged. Trousseau, in his "Treatise on Therapeutics," clearly defines the clinical features of each for the purpose of differentiation.

Pneumonia in the aged is of a sthenic type and resembles the frank pneumonia of adult life. It is rather uncommon in advanced life, affects the strong and well preserved individuals and announces its onset and course by well marked symptoms which afford reliable indications for diagnosis. Compared with pneumonia of the aged, we notice great dissimilarity and the reason becomes apparent why this disease has been regarded as belonging to a special variety. It is peculiar to the old and infirm, latent in its development, obscure in its manifestations, and erratic in its course. The constitutional disturbance is sometimes overlooked or imperceptible, and the clinical history so puzzling to the observer that it is very difficult to diagnose. During the past year I have had opportunity to study a large number of cases of pneumonia of the aged, and present in this paper a few salient facts to arouse discussion. The literature upon this subject is very limited, which is somewhat surprising when we consider how common it is as a fatal disease among the aged. In this climate latent pneumonia is unquestionably the cause of more deaths in the aged than all other diseases combined. Recent authorities agree that the mortality rate in those over sixty years of age is about 80 per cent., and it steadily increases with advancing age. Thus Loomis states that after sixty-five pneumonia is the cause of death in 90 per cent. To one who fills the death certificate from diagnostic opinion this statement may seem exaggerated, but the autopsy too often shows the effects of the disease when its presence was not suggested, and explains sudden deaths which were thought to be due to cardiac disease. Senile debility as a cause of deaths is too often an apology for not having recognized senile pneumonia.

My experience, although too slight to admit of strong deduction, is in accord with these views. At first the disease eluded me because of it obscure character. The aged person died without complaint or sign of suffering, and the post-mortem revealed advanced consolidation. These facts attracted my attention, and taught me the necessity of looking for its presence at every visit. Its frequency as a cause of death has been easily proved.

The reasons why the aged are so prone to pulmonary disease are explained by a study of the senile changes in the lungs and the causation. In old age the lungs lose vital capacity, owing to degenerative changes in their structure. The air-cells are dilated or ruptured, and the capillaries diminished or obliterated. From insufficient use the lungs are not filled, the inspiration is not deep or complete. The air becomes rarefied, and the tidal flow is incompetent to maintain the proper interchange of gases. The chest wall accommodates itself to the diminished size of the lungs by compensatory contraction and stiffening which render the respiratory act shallow and partial. Consequently, the amount of oxygen inhaled and of carbon dioxide exhaled are markedly diminished. There is also an apathy of function and loss of sensibility blending to subdue resistance.

Bronchial catarrh of a low grade exists in a majority of cases. The circulatory disturbances resulting from weak heart, arterial changes, and vaso-motor disturbances, accompanied by other complications such as embolism, or tendency of vesicular structures to collapse, are potent factors in the causation. Adding those dyscrasias and injuries such as syphilis and fractured hip-joint, to which pneumonia is apt to play a secondary and closing part, we have touched upon the intrinsic influences sufficiently to show that in old age there is a striking predisposition to the disease. Again, when we reflect that no organ or function is so exposed to external influences of a changeable and trying nature which endanger the healthy adult and always effect the respiratory mucous membrane somewhat, it does not seem strange that few of the aged escape senile pneumonia. The vast majority of all cases occur between November and May. During January and February the attacks are less frequent than in the other months. A cold wind, especially from the northeast, is sure to be followed by a number of patients succumbing. I have noticed this relation at the almshouse whenever the wind came from the east. When the wind was cold and blew hard a number of cases developed within a few hours after. The tendency to congestion, the shock to the weak system and the effect on the vaso-motor system have to do with this fact.

As to the lodgment of food in the bronchi mentioned by Traube, I have never seen such a case, but it seems a reasonable accident and cause, occurring in those affected with mental debility. The mental condition plays an important part by influencing the bodily condition and habit. Several cases have come under my observation among the chronic insane—especially those suffering from dementia.

Aside from the lesions of the inflamed portion of the lungs, the morbid anatomy presents certain features peculiar to the aged on account of the senile changes mentioned. The most complete description of the pathological changes in senile pneumonia may be found in Charcot & Loomis' "Diseases of Old Age." I shall only give the principal points in which the lesions differ from the morbid appearances in the adult. The upper lobe is more apt to be affected and the disease to extend downward. In the stage of congestion the affected portion crepitates less and the lung does not sink in water. The exudate is more fluid and it is sometimes difficult to decide whether the lung is simply congested or pneumonia in the first stage be present. If a section of the tissue be placed under the microscope a viscid fluid will be seen exuding from the vesicles which coagulates on the addition of alcohol in an amorphous granular substance containing red blood globules. In œdema with congestion the air-cells contain serum rather than inflammatory exudate. Owing to rarefaction the lung does not sink to the bottom of the vessel even when hepatized. The ratio between right- and left-sided pneumonias is not preserved in old age. The left lung is affected nearly if not quite as often as the right. The pneumonia is also more apt to be double. Occasionally one finds the evidence of a tubercular pneumonia where it was not suspected. I have lately seen the lesions of a diffused pneumonia of this type at the autopsy in several cases where the clinical history presented no marked difference from that shown by the form considered.

The clinical features of senile pneumonia are of such varied and obscure nature that the utmost care and diligence are requisite for their detection. There are cases in which, to the ordinary observer, the patient betrays not the slightest indication of his condition. He complains of no malaise; he walks about as usually; comes to the table and partakes of the usual meal; feels a little tired; lies down, and a few hours later is found dead. The autopsy reveals one or both lungs in one of the stages of hepatization. In other cases there are symptoms of grave disease, but of such indefinite nature as to mislead, rather than guide, the physician.

The commonest prodromes of senile pneumonia are slight wandering pains in head, trunk and extremities, slight flashes of heat, more or less depression of spirits, etc. These prodromic symptoms are rarely well marked; frequently they are so slight as scarcely to attract the attention even of the patient himself; sometimes they are entirely wanting. Even when present these premonitory symptoms are never sufficiently distinctive in character to determine whether they are due to grave disease or to those ill-defined and transient ailments peculiar to old age.

The invasion of the disease is marked by a train of symptoms not less vague and indistinct. The symptoms are seldom subjective. There may be a slight chill, but it is never well marked, and is sometimes absent. The most constant symptom at the outset is an elevation of temperature, often imperceptible at the axilla, but in the rectum showing a rise to 102°–103°. This, in the absence of chill, is often the only reliable datum by which we can determine the time of access of the disease. Later, the temperature may reach

104°–105° or even some higher degree. The pulse in senile pneumonia shows many variations in frequency, regularity and force. It is usually accelerated, irregular or somewhat intermittent and even dicrotic; but here, as in all diseases of old age, owing to the frequency of arterial changes, observations upon the radial pulse alone are entirely unreliable, and we must resort, for trustworthy information, to cardiac auscultation.

The disturbances of respiration in this form of pneumonia do not follow the same rules as in the pneumonia of adults. The respirations are usually less increased in frequency; often they are of a puffing or panting character. Dyspnœa and catching respiration are not particularly noticeable unless the inflammation has its seat in the apex of the lung. The respirations rarely pass thirty per minute. I have noticed a peculiar form of respiration which I have come to regard as somewhat diagnostic. The breathing is short, shallow and slightly rapid, one shoulder is slightly raised, the head thrown back, and the whole act performed with apparent effort. This one feature has often served to detect pneumonia in an aged patient when nothing else indicated gravity of disease. Cough may be slight or wanting; and, curiously enough, the cough and dyspnœa of a chronic bronchitis or asthma frequently subside on the supervention of a pneumonic attack, so that the patient, far from suspecting added disease, feels such marked relief as to believe his condition much improved. Sometimes, when cough is present, it is due to coexisting bronchitis, and it is then of a short, hacking variety.

Owing to the rapidity with which the disease passes through its various stages, the sputum characteristic of the pneumonia of adult life is rarely present in the senile form. Some authorities state that the rusty sputum occurs in about one-third of all cases; but, as many of the more obscure attacks of the disease undoubtedly pass unnoticed and unrecognized, the above proportion is probably too large. The expectoration is oftenest somewhat colorless; and when due to coexisting œdema is serous in quality and lacking in the usual cell elements. In some cases it is of a prune-juice or chocolate color, which is always an unfavorable prognostic.

Frequently there is no perceptible increase of expectoration beyond that which is so common in the aged as almost to be regarded as physiological. It is said that the expectoration never becomes purulent in the stage of resolution, and this is entirely in accord with my own observations. It will be remembered that post-mortem observations show pleurisy to be absent in more than two-thirds of all cases of senile pneumonia. Accordingly we find that clinically a large proportion of patients are free from pain in the chest; and when, owing to existing pleurisy, pain is present, its severity is moderated by lowered innervation. The countenance affords valuable information to the careful student of physiognomy. The face has an earthy appearance, with a dusky flush often on a subicteric background. Cyanosis occurs, and may be confined to the eyelid alone. The eyes may be dull or preternaturally bright. The expression is sometimes anxious, but, owing to enervation, is more apt to be dull and apathetic. The mental faculties are usually more or less disturbed. There may be merely a tendency to somnolency together with some dullness of comprehension and lack of ability to frame a ready answer; but this is common in all febrile disturbances of old age.

Occasionally there is exaltation with loquacity, and a tendency to get out of bed. Depression merging into stupor and coma are frequently observed, and subsultus may occur. There is always more or less anorexia. Frequently they will not complain of thirst, yet will drink with avidity when water is put to their lips. The tongue is either red and dry or brown, dry and furred. Sometimes this is the only sign of severe disease. The teeth often present sordes and the tongue is protruded with difficulty. The changes in the urine are less marked than in pneumonia of adults.

From the above description it will be seen that the symptoms of senile pneumonia are, at best, extremely vague in character. The frequent absence of all pain, and the apathy with which it is borne when present, the slight and varied nature of the respiratory disturbances, the irregularity and intermittency of the pulse, pointing to cardiac disease; the sudden mental disturbances and frequent coma simulating cerebral lesions,—all conspire to mislead the physician and obscure the diagnosis.

The course and duration of the disease differ from those of pneumonia of adult life; for, while the completion of the earlier stages is sooner accomplished, the stage of resolution is much longer protracted. Recovery, when it occurs, is generally marked by a somewhat lengthened crisis, and a critical diarrhœa, this continuing through the lysis, is more common than a critical sweat. Symptoms of approaching death are extreme pallor, with cold, clammy perspiration; cyanosis, cold extremities and blueness of the nails; also, frequent, shallow and often sighing, gasping or puffing respiration; dilatation of the alæ nasi; tumultuous heart's action and dicrotism; coma, subsultus. There is often just before death a marked subsidence of dyspnœa and cough. A sudden rise or fall of temperature is a fatal prognostic. An unfavorable termination may be predicted whenever there is orthopnœa, inability to raise, apathy, marked loss of memory, delirium, jactitation or stupor.

The physical signs are always unreliable and subject to wide variations because of the changes in the lungs and chest wall. One cannot depend upon his knowledge of the physical signs indicative of pneumonia in the adult to diagnose the senile form. Certain modifications of the principle signs are present in all old people, and may prove misleading. It is often difficult to decide how far these modified signs are due to disease or to natural changes. On examining a number of chests unaffected with pneumonia it will be found that the areas of resonance and dullness are not alike in all but differ somewhat in each case. Over certain regions of the chest, especially at the apices, the percussion note is clear, low pitched, and extra resonant when compared with the adult chest. At the posterior portions of the chest it is more often dull; the character of the note at either region is very different from that elicited from the healthy adult chest. Practice alone can make one familiar with these sounds.

The respiratory murmur is rarely purely vesicular at any place. It is harsher or extremely feeble—far away and indistinct over one region, rough and blowing or puffing over another. The voice sounds are loud and rather intense as a rule, and are apt to be bronchophonic; vocal fremitus is very slight over the posterior portions of the chest.

In studying the physical signs of senile pneumonia we are obliged in most cases to determine conditions without the cardinal rule of comparison, inasmuch as the two sides do not show that difference common in the adult. Aside from the suspicion aroused by the slightly altered breathing, physical signs offer no positive information until the exudate has filled a portion of the lung to a considerable extent. Then dullness is increased slightly, but is a sign of relative value. Vocal fremitus furnishes nothing to be relied upon alone. The crepitant râle is seldom heard. It may be developed occasionally by obliging the patient to cough or take a full inspiration, thus distending the vesicles. It is often impossible to accomplish this purpose in those of feeble intellect. I have at times found it necessary to resort to artificial respiration to obtain the expiratory sound and crepitant râle. Subcrepitant and large mucous râles are usually heard over a localized area, and later become quite general. The breathing may be only slightly altered or puerile. If it is tubular anywhere it is apt to be heard over the root of the lung and a bronchial souffle or the veiled puff of Læennec may be audible over the inflamed portion. Frequently during the stage of red hepatization the signs are more distinct and positive; but the sounds of percussion are usually relative. If marked dullness is present fluid in the pleural cavity may be suspected. This condition is often overlooked. When the upper lobe is affected the dullness is not as great as when the disease is located in the lower lobe, owing to the rigidity of the sternum and chest wall and the retraction of the lung away from the ribs. Unless the dullness be very plain it can be elicited only by light percussion. Deep percussion should be carefully employed as it gives the resonance of the whole chest. Increased vocal fermitus is not constant and may be absent. Tubular or bronchial breathing of a distinctive character now appears and is absolutely diagnostic. It is even more intense than that heard in the adult and has a metallic quality, with prolonged expiratory sound higher pitched than the inspiratory. This sound alone is sufficient to base the diagnosis upon, and it matters not if all the others are obscure or absent. Gurgling and subcrepitant râles persist and the bronchophony is somewhat changed by the weak, quavering voice of the aged. To my ear it is not ægophonic as stated by some authorities.

The stage of gray hepatization is marked by some changes not common in the adult. Some œdema is made manifest by the crepitating râle, and larger gurgles sound near the ear over a large area.

If the disease takes an untoward course the fact is learned largely by the symptoms, the change in the sputum (if there is any) and the signs of softening gangrene and abcess. It must be remembered, however, that cases terminate in this way without any trustworthy indication by which they may be recognized; also, that the physical signs are subject to modifications in each case and there is no typical group of them in any stage. Thus it will be seen that exploration of the lungs often gives negative results, and it is necessary to depend largely upon the symptoms to assist in the diagnosis. Grisolle states that we must base our opinions, "first, on the extreme frequency of pneumonia in old age; secondly, that of all the phlegmasiæ of advanced life pneumonia is the one that is oftenest latent; and thirdly, that of all acute diseases in old age pneumonia produces the highest range of temperature and the greatest prostration." The symptoms to be observed with the greatest caution are the chill, the brown or red tongue, malaise, change in breathing, the sputa, the malar flush, cyanosis, delirium, cough, pain, prostration, rectal temperature and heart beat. Sometimes one of these symptoms alone is sufficient to direct the attention to the thorax, but usually it is necessary to cluster them. At times they will be vague and confusing and point to cardiac or cerebral disease. It is a wise rule to exclude pneumonia first and not disregard the slightest deviation from the usual standard. The diseases most apt to simulate pneumonia are by hypostatic congestions, simple congestion, œdema, capillary bronchitis and pleurisy with or without effusion. Ordinarily there is not great difficulty in differentiating between them, provided the diagnostician considers all the prominent signs and symptoms. The points of differential diagnosis are sometimes not well marked and analysis is necessarily slow.

A large proportion of cases of senile pneumonia terminate in death. According to Grisolle 80 per cent. die after seventy years of age, and all authorities agree that very few recover. The age and general condition are the factors most important to consider in the prognosis. Complications have a telling influence, especially diseases of the heart, arteries or kidneys. Oedema is always an unfavorable sign. Pneumonias of the upper lobes are more dangerous, and double pneumonias are almost certainly fatal. Fatal cases rarely survive the seventh day, and those who live beyond that day may recover. Death results from heart failure, which may occur suddenly from shock or paralysis or slowly from exhaustion. It may be caused or hurried by a complication. Consequently the prognosis as governed by treatment depends almost entirely upon the dynamic action of the heart. Obviously we have to deal with a feeble heart which is endeavoring to perform increased work under discouraging conditions. Accepting that its undue activity is caused by vaso-motor disturbances, by a solidified portion of lung and an elevated temperature, and that it is usually greatly hindered by arterial and other changes, we know the dangers and the indications for treatment. Arterial sedatives should never be employed. Nourishment and stimulation should be discreetly crowded from the first. The food must be given in a digestible form, and the best stimulants are alcohol and carbonate or muriate of ammonia. The aged cannot break up alcohol as readily as the adult, and if not given judiciously it may cause depression from narcosis. The benefits to be observed are those which we notice in the typhoid state. A continuously high temperature involves greater tissue waste and vital depression in the old and debilitated, and the heart can be relieved of some extra work by controlling its power and beat in a manner which will not enfeeble at the same time. Cold sponging cautiously used is preferable to large or repeated doses of antipyretics. Antipyrin acts well in some cases and badly in others. Quinine is not so depressing and is best given in tonic doses frequently repeated with iron. However, large doses are at times well borne. Antifebrine I have never tried. Expectorants are seldom needed and rarely do much good. Digitalis may prove very beneficial if properly administered. It is especially useful when œdema is present as the result of a flagging heart. In an emergency when a momentary action is demanded, the etherial stimulants may take its place. If the patient does not respond to moderate stimulation we cannot expect much from crowding it.

It is well to keep the surface warm, and jacket poultices afford some relief if not too large or heavy. Complications should be watched for with great care. They will, however, escape detection even with constant vigilance, and the experienced will never be surprised at any development in the dead house. The result of any mode of treatment in the asthenic form of pneumonia which I have attempted to describe depends largely on its having been commenced early; otherwise we may wait

> "'till,
> Like a clock worn out with eating time,
> The wheels of life at last stand still."

SUDDEN COMA.

BY ARTHUR W. HURD, A. M., M. D.
Assistant Physician, Buffalo State Asylum for the Insane.

[Read before the Physicians' Club.]

The limit of an evening's paper on a subject so comprehensive as the one chosen allows a consideration of but a few of the many causes of "sudden coma," with a brief study of some of the points of differential diagnosis. As bearing upon the subject of cerebral œdema as *one* cause of coma the history of the following case is of interest.

The patient was a man fifty-four years of age, married, with a history of slight intemperance but successful in business, and reported to excel in his trade of roofer. Two years before admission to the asylum he fell from a building and received a scalp wound which is reported to have bled profusely. Following the accident he began soon to show mental changes, viz., forgetfulness, inattention to business and a lack of concentration. He made foolish and ill-considered business ventures and lost considerable property. This deterioration continued; he lost in flesh and strength, wandered aimlessly about the streets and developed delusions of power, great ability and physical capacity. When he first came under observation his condition was one of mental enfeeblement, and his delusions were less prominent than they had been. A few months after, when admitted to the asylum, he not only strongly asserted his former delusions but had become homicidal and had even concealed weapons to injure certain members of his family. He was very feeble in mind, deficient in memory, and showed considerable ataxia in his gait. There was also a certain amount of paresis of the facial muscles, and hesitancy of speech. His subsequent history until death is without special incident. He became much demented and wandered aimlessly about the ward talking incoherently. He exhibited the symptom occasionally seen in cases of organic brain disease, of severe gritting of the teeth at fairly reguiar intervals. His condition was recognized as one of paresis. He remained in this state about six months. One afternoon he appeared in some distress and evinced pain and abdominal tenderness by protecting the abdomen with his hands. He was put to bed, a light anodyne given and in the evening appeared in his usual condition. At 2 A. M. he had a general convulsion, and when seen by the doctor a few moments after was deeply unconscious with stertorous breathing and cyanosed face. He passed urine and feces involuntarily. The pupils were equal but contracted, and the muscular system relaxed. The temperature of both sides appeared the same; there was no drawing of the mouth to one side or other evidence of hemiplegia. This condition deepened during the day following, and he died at 11 P. M., twenty-one hours after the first convulsion.

The autopsy, made twelve hours after death, revealed the following: "Brain only examined. Vessels of scalp gorged with blood. The entire cortex of the brain was covered with a gelatinous exudate, which was quite watery and fluid beneath a delicate outer layer which possessed sufficient consistency to retain the fluid underlying. This watery collection was very general and abundant, and in some instances had caused apparently marked atrophy of the underlying convolutions. These depressions were especially pronounced over the parietal regions, the lower frontal convolutions of the left side and in the region of the Island of Reil. The puncta vasculosa were marked and the middle cerebal arteries were the seat of atheromatous degeneration and were uneven and friable. The basilar artery had a calcareous plate in its wall which was distinctly audible when cut against with the knife. There was an excess of fluid throughout the brain. Each lateral ventricle contained a bag or sac completely filling each cavity and containing the same serous fluid. The walls of the sacs were so delicate that the fluid of one when laid on the table escaped by osmosis; the other was preserved. These sacs were not attached to the walls of the ventricles, but seemed to have a slight connection with the choroid plexus, though the latter were not generally cystic. No rupture of a blood-vessel was discovered, no clot was found and the fluid did not have even a bloody tinge."

In the text-books of a former decade the term "serous apoplexy" was a common one, and that condition differentiated from those forms of cerebral apoplexy where the compressing force was escaped blood. But now, this condition of an apoplexy, purely serous, is ignored, and little mention made of it except as it is cited as a matter of history or as an instance of the progress of modern pathology.

Probably, however, the experience of most of those whose post-mortem opportunities are large, will bear out the statement that in many cases dying with symptoms of cerebral compression there is often found a condition of cerebral œdema as described in the above case, and in which also the microscopic examination will fail to show sufficient evidence of the presence of blood corpuscles to give to the effused fluid a sanguineous tinge.

Between this condition and one of blood clot there is a difference so marked as to deserve separate consideration. In their causation the difference would seem to be more than one of degree only, but of kind as well.

The recent progress of cerebral pathology in determining the existence of vaso-motor centers in the walls of the vessels of the brain aids us in establishing this condition as one separate from cerebral hemorrhage, both in nature and mode of development.

It is not demonstrated that atheromatous arteries and miliary aneurisms are as frequent, as constant or as necessary an accompaniment of this condition as they are of cerebral hemorrhage. The outset of the attack is apt to be more gradual, the development of paralysis slower and the loss of consciousness not as sudden or profound as in true homorrhage. There appears rather to be an increasing cerebral compression with its more gradual abolition of the power of voluntary muscular motion, until the higher intellectual centers are invaded. This is seen in cases of chronic meningitis where the fatal termination is ushered in by symptoms of cerebral compression with increasing coma and paralysis, and in which after death the medulla, with the accompanying vital nerve centers, is found surrounded with a quantity of serous fluid sufficient to cause great if not fatal pressure. This escape of fluid has been attributed by some to the relatively great pressure of an hypertrophied heart upon vessels which have lost their tone or strength. But in the light of recent developments in vaso-motor anatomy is it not a more probable theory that in these cases variations in the vaso-motor conditions of the cerebral vessels are themselves the prime factor? A paresis of these centers, either through nerve degeneration or through the influence upon them of some abnormal condition of the blood circulating through these vessels, or both combined, will account for such a condition of the vascular walls as will allow this fluid exudation. And in these patients who usually present previously symptoms of physical derangement the assumption of such changes is by no means an improbable one.

Of course the demonstrability of vaso-motor centers in the brain is essential to this theory. As is well known, their presence has been disputed, and no one will deny that their demonstration is difficult, but as bearing on this point, and also on that of medullar compression, allow the quotation of the following passage from Meynert's recent work on "Psychiatry:,'

"The oblongata, which but for its cerebellar relations need not be considered apart from the pons, impresses us with its great importance as a vaso-motor center. Owsjannikow has studied the oblongata most carefully from this point of view. This author has demonstrated that removing layer upon layer of the trunk causes a fall of manometrical pressure, as measured in the carotid, even before the pons has been reached, which signifies that that portion of brain substance has been destroyed which when normal, maintains the blood-vessels in a state of definite contraction. Blood pressure does not depend altogether, as Bezold would have us believe, upon the heart and an increase of cardic innervation, but in an opposite direction, chiefly upon the resistance which the contraction of the capillary vessels opposes to the forward movement of the blood. Stricker very properly remarks that we are here concerned not only with the contractility of the finer arteries, but also, as has lately been shown, with the smaller capillaries endowed with nerves, and even with the delicate veins. The blood pressure ceases to fall as soon as the sections have been laid within $\frac{3}{4}$ mm. above the apex of the calamus scriptorius. If the destruction by layers has not transcended the level of the origin of the facial nerve the diminished blood pressure can be restored by irritating the sciatic, the trigeminal or the auricularis magnus. But from this point on the possibility of restoring the blood pressure by stimulations of sensory nerves sinks until we reach the before-mentioned lower limit of the center for the vaso-constrictors."

This condition of local vaso-motor paresis is, however, not confined to the brain, for if it were it might properly be asked how it is that the brain, of all the organs, is thus subject. We have an example of an analogous condition in œdema of the lungs, which has been shown by Welch to be due to a paralysis of the left side of the heart, and we cannot explain the pulmonary œdema found on autopsy on the ground of diseased or ruptured pulmonary vessels or by increased cardiac pressure, for the one condition is not found after death or the other symptom observed during life.

It is the tendency of the medical mind to believe what it can explain and to ignore the inexplicable. Should it be able to explain and work out the production of cerebral œdema upon this or any other theory the text-books will again give "serous apoplexy" the prominence and distinctive treatment which it once received. With epilepsy, hysteria, sun-stroke, syncope, cerebral apoplexy, opium and uræmia poisoning, etc., as causes of sudden coma, we are all more or less familiar, but there are certain diseases which exhibit it that are less known, and the opportunities for studying which are limited, even in the largest medical centers or in the most specialized practice. One of these, viz., cerebral syphilis, has been very fully discussed by Dr. Althaus in a recent paper before the New York Academy of Medicine. The importance of early diagnosis in such a case is apparent. The symptoms of cerebral irritation, viz., increased blood-pressure, slow respiration and pulse and subnormal temperature, give place to a deeper coma and a more complete muscular relaxation, indicating an increasing cerebral compression.

This specific coma comes on often without premonitory signs or paralytic warnings, and habitually at night. It is one of the rare causes of sudden loss of consciousness and one of the few in which an accurate diagnosis is essential. Here, without previous history to guide, the remains of a primary sore or the scar of a specific ulcer may afford the only clue; just as the bitten tongue in epilepsy or the albuminous urine in uræmia or the laudanum-bottle in opium poisoning may be the only tell-tale witness whose testimony will enable the puzzled doctor to decide.

Time will only allow mention of a few of the problems presented by these cases of sudden loss of consciousness. Epilepsy and hysteria often present confusing similarities. The temperature, once so strongly insisted on as a point of differential diagnosis, is not decisive, for the temperature also rises in hysteria, though not usually to the extent seen in epilepsy. The sensitiveness of the pupils is a more reliable guide as well as the emotional disturbances which are apt to crop out at some period of the hysterical coma. Wakefulness and activity following the hysterical attack may simulate the post-epileptic mania which is occasionally substituted for the usual stuporous sleep. However, the term "hystero-epilepsy" stands as a monument to the fact that there are at least some difficulties in differential diagnosis.

Insolation, in the severe form, known as thermic fever, develops an exceedingly high temperature at times, sudden and complete loss of consciousness, muttering delirium and often epileptiform convulsions. The urine is scanty and may contain albumen. The known exposure to heat and the high temperature usually render the diagnosis easy, but if a cerebral apoplexy should occur on a hot day, with a rise of temperature, and without drawing of the mouth, and with such muscular relaxation as would render the recognition of hemiplegia impossible, this might be very difficult, though important.

The symptoms of opium poisoning are almost classical, but the pin-point pupils and the slow respiration may not always be relied on for efficient information; for we may have both in syphilitic coma. *Inequality* of the pupils as the result of opium poisoning is occasionally seen and might lead one to suspect cerebral hemorrhage. Then, again, the presence of unequal pupils in a state of health is not very uncommon, and the same *relative* inequalitymay exist after taking opium; at least to such an extent as to confuse the diagnosis.

Irritative poisons occasionally produce stupor and even coma, and this has been noted by one observer (Wood) as being the chief symptoms which he found in a patient suffering from Paris green poisoning. In this, as in other cases of poisoning, it may be said that the diagnosis from cerebral hemorrhage, if unaccompanied by localized paralysis, from uræmia, fracture of the base, etc., may be very difficult without a history of the case or the knowledge of some attending circumstance which may afford a clue.

Uræmic coma is not uncommon, and is a frequent and often puzzling condition forced upon the hospital internes in large cities. Rotary movements of the eyes and head, tongue biting, clonic contractions of all the muscles or only twitchings of groups may be present; or coma alone, unaccompanied by these evidences of brain irritation, may appear. An examination of the urine is essential, and it may be necessary to obtain this by the catheter. The finding of albumen is not by itself diagnostic, for albumen frequently appears in epilepsy and insolation, and again fatal uræmic coma may come on without albuminous urine. The specific gravity is of more value; and a combination of albumen with a low specific gravity may ordinarily be taken as establishing a probable diagnosis. In cases of continued doubt the integrity of the kidney secreting surface may be tested by the administration of potassium iodide. It is said that one hour after exhibition the drug can be detected in the urine by the starch test, provided the kidneys are performing their functions properly. If they are not no reaction can be obtained, or only after a long interval. Mention only can be made of chronic meningitis, brain tumor, ruptures of abdominal aneurisms, perforations of intestines and mental emotion, as among the causes of this condition, though they are occasionally seen and always of interest.

The coma developed as the result of cerebral hemorrhage is distinguished as a rule by the age of the patient, the atheromatous conditions of his arteries, hemiplegia, inequality of pupils, drawing of face and elevation of temperature on the affected side. But in the course of general paralysis of the insane or paresis we have epileptiform and apoplectiform convulsions, at times difficult to distinguish did we not have a history of the case to guide us. The apoplectiform state may present the ordinary symptoms of cerebral hemorrhage but which is recovered from, paralysis and all, within a few hours or days. The epileptiform convulsion of paresis may so nearly simulate an attack of grand mal that the differential diagnosis without a history may be difficult, and it is a question if the mode of production is not the same, viz., that irritation by the lesions of paresis may give rise to the same vaso-motor disturbances in the brain as are supposed to exist in an ordinary case of epilepsy: that the vaso constrictors respond in the same manner whether their stimulus be a paretic lesion, a glioma or a depressed bit of skull.

There are, however, conditions of coma occurring in paresis without convulsive movements, and followed by a short paralysis, which simulate true apoplexy very closely but differ only in their subsequent progress. Post-mortem appearances indicate that these frequently are due to small meningeal hemorrhages chiefly subarachnoidean, which, though causing unconsciousness, and even paralysis, usually localized at the time, are soon tolerated by the brain, which so readily accommodates itself to unusual conditions.

These hemorrhages are probably the basis of the sub-arachnoidean cysts occasionally found in autopsies on the brains of those dying of paresis. Possibly such was the origin of the ventricular cysts found in the case above described. A paretic may present conclusive twitchings of an arm or leg, or of the neck and facial muscles, with profuse perspiration, high temperature and coma more or less profound, and in a few hours be up and about in his usual health, apparently. Such acute conditions it seems more reasonable to suppose are due to temporary vaso-motor changes induced by the ever-present lesion, than to a new gross lesion, as a hemorrhage, from which recovery could hardly take place so quickly.

Of neurologists it has been said: "So great their science, so small their art"; but it must be remembered that science must precede, and art, if it be rational, follow; and it is to be hoped that work in this little-known field of vaso-motor science may some day result in a large return of therapeutic art.

A CASE OF AN OLD DISLOCATION OF THE ELBOW-JOINT TREATED BY ARTHRECTOMY.

BY HERMAN MYNTER, M. D.
Surgeon to the Buffalo General Hospital.

[Read before the Buffalo Medical and Surgical Association, June 7, 1887.]

George Read, aged 9, was admitted to the Buffalo General Hospital on April 19, 1887. Patient is a strong, healthy boy. Last November, while wrestling, he was thrown, receiving his and his opponent's weight on his left elbow. It was rubbed and passive motions attempted until he entered the hospital, when it was found that there existed a neglected dislocation of the radius and ulna behind the condyles of the humerus, the coronoid process filling the olecranon fossa, and the head of the radius resting on the posterior part of the external condyle of the humerus. The characteristic deformity with elevations and depressions was present, and the forearm shortened one-half inch. The arm was perfectly straight with no flexion whatever, but pronation and supination were quite free.

April 20. Operation under ether. The tendon of the triceps and thereafter the external and internal lateral ligaments were cut subcutaneously and successfully. Motions to break down the adhesions were made, and all justifiable force used to reduce the dislocation. Failing in this the joint was freely opened by aid of two lateral incisions, all the adhesions severed with the knife and the epiphyses freely exposed through the wounds, the much thickened and granulating capsule of the joint partly extirpated and a mass of new-formed, horny tissue, which completely filled the olecranon fossa, removed with hammer and chisel. A small detached fragment of the olecranon was removed. The sigmoid cavity of the ulna and the articulating surfaces of the humerus, the cartilages of all of which were found changed to a granulating, fibrous tissue, were smoothed down with a knife and the dislocation then reduced. The joint was thoroughly washed out with corrosive sublimate (1-1000) and the incisions closed with catgut sutures excepting a small place in the center, and the wound then allowed to heal by Schede's moist blood-coagulum process. A complete sublimate bandage was applied, under which healing by first intention took place. Passive motions were commenced on May 3, and have since been rigidly carried out every day. He is now able to move the arm about 90°. A small decubitus from pressure over the olecranon retarded the recovery a couple of weeks.

This case has its peculiar interest, opening, as it does, a new although limited field for arthrotomies and arthrectomies in cases of old dislocations of the joints. A dislocation of the elbow-joint is generally considered irreducible after six weeks, although many cases are on record in which the reduction was successfully accomplished after months. But, anyway, it is only in the minority of cases that the result is successful. What are we to do in these cases? Leave the patient with his stiff, straight, useless arm, with which, if he be a working man, he is unable to work? There has formerly only been one alternative, resection of the joint or perhaps rather of the lower end of the humerus, and I am not aware that it has been performed; and even then, the arm will generally, if the patient be young, become shorter as he grows older on account of the removal of the lower epiphyseal line, through which the growth of the humerus in a great measure takes place.

Happily the results of modern antiseptic treatment show us the way. Modern surgery has taught us not only that joints may be freely opened under antiseptic precautions, arthrotomy, but that we formerly in our resections of tuberculous joints removed, what generally was healthy, the epiphyses of the bones, and left what was diseased, the capsule. A new operation, arthrectomy, has taken the place of resection, consisting in the removal of the diseased capsule and the local destructive process of the bones, but else leaving the bones intact, and the results of this operation have uniformly been excellent. I saw any number of arthrectomies of elbows and knee joints during my recent travel in Europe, and the rule was union by first intention and a somewhat moveable joint. What is the rule in a tuberculous joint should, of course, be still more the rule in a dislocated, but otherwise healthy joint; and as in this case it was impossible to reduce the dislocation even after a number of tenotomies, I did not hesitate to freely open the joint and make a partial arthrectomy, and the result justified the proceeding. The whole olecranon fossa was found filled with an exostosis, the result, I suppose, of the local irritation kept up by the passive motions and the pressure, during these, of the processus coronoideus ulnæ against the olecranon fossa. After the exostosis was removed with the chisel the reduction was easy. Before that the bones could not be kept in contact, radius and ulna sliding backwards immediately. The cartilages were found changed into a fibrous tissue, here and there a granulating process going on; the capsule was much thickened and granulating. I therefore removed the superficial strata of the cartilages and a large part of the diseased capsule, relying upon the organizing quality of antiseptic blood (Max Schede's healing by aid of a moist blood-coagulum) to remedy the loss of both. The joint was allowed to fill with antiseptic blood, which fills up all cavities and recesses left, and probably is changed into different anatomical structures according to nature's want, and I have little doubt but that a synovial capsular membrane has been formed instead of the one I removed, helped on by the rigid passive motions. I take pleasure in recording this case to-night, and showing the patient, confident that this novel treatment will meet your approval.

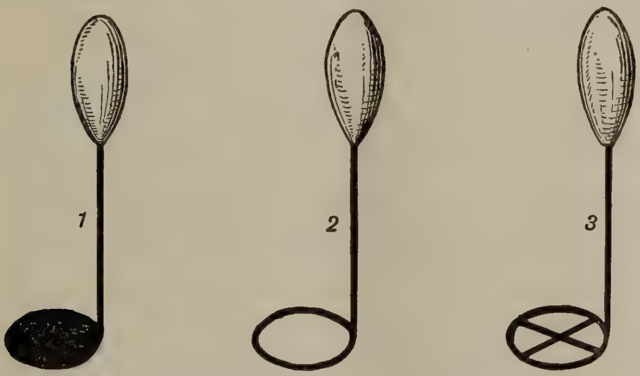
A REMARKABLE verification of scientific prophecy has recently been published. For a long time chemists have contended that the element *fluorine* if ever isolated would be found to have certain properties, among which would be its gaseous state and its extraordinary activity and energy. These predictions were based, to a large extent, on its low atomic weight.

Moissan has recently been the first to isolate and experiment with pure fluorine, and has published his experimental methods in the *Comptes Rendus* (CIII., 202). He filled a platinum U tube with dry hydrofluoric acid kept in a fluid state by a surrounding of methyl chloride, the temperature being thus kept at —23°C. Through this liquid he passed a current from twenty large Bunsen cells. The colorless gas was disengaged from the positive pole. In it quartz and silicon burned brilliantly, forming silicon fluoride. Sulphur took fire in it, and iodine burned with a pale flame. Cork carbonized in it, while alcohol, turpentine and petroleum inflamed on contact. Hydrogen collected at the negative pole.

THE RESULTS OF THE NATIVE PERSIAN METHOD OF RADICALLY TREATING HERNIA.

BY J. P. COCHRAN, M. D.
Oroomiah, Persia.

In one of my letters from Oroomiah, published in the July issue of THE MEDICAL PRESS for 1886 (p. 462), I described the native method of radically treating hernia by means of the actual cautery. Without repeating the full description I then gave I will simply call attention to the accompanying figure which represents the cautery irons used during the operation. As I wrote at that time, I could give only meagre reliable statistics as to results. Since then, however, I have obtained reports of fifteen more cases treated as then described. These are all reliable.



I have recently cauterized seven myself in our hospital, but the results are not yet apparent. Two of them are cases 14 and 15 of the table below, which were not cured by the native operator, and upon which I operated again. Cases 1 to 4 inclusive were operated on by one man. In case 14 a hot stone was used instead of a hot iron.

CASES OF INGUINAL HERNIA, OPERATED UPON BY METHOD DESCRIBED IN "THE MEDICAL PRESS."

Name.	Place.	Age.	Right or Left.	Date of Op'n.	Result.
1. Benjamin	Sherabad	60	Right.	20 years ago.	Cured.
2. Purhad.	"	50	R. and L.	20 "	Cured both.
3. Baba	"	40	L.	20 "	Cured.
4. Odishao	"	35	R.	20 "	Cured.
5. Mirza	"	40	R.	15 "	Not cured.
6. Gulmemmad	Hiderloo	31	L.	1 "	Cured.
7. Baba	Balow	30	R. and L.	½ "	L. cured, R. not.
8. Hashim	Chunkiraloo	51	R.	1 "	Not cured.
9. Abdul Riza	Oslor	44	L.	4 "	Cured.
10. Ammoundlah	Yaghmuraloo	30	R.	15 "	Cured.
11. Ali	Chunkiraloo	31	L.	1 "	Not cured.
12. Zachariah	Nakhchewan	51	R.	1 "	Cured.
13. Baba	Jamalawa	41	L.	1 "	Not cured.
14. Mahmoud	Khay	35	R. and L.	3 "	Not cured.
15. Yosip	Marbishoo	15	R.	4 "	Not cured.
15 cases.			10 R., 8 L.	Op'ns, 18.	10 cured, 8 not.

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BUFFALO, N. Y., AUGUST, 1887.

THE UNIVERSITY OF BUFFALO; DR. ROCHESTER'S SUCCESSOR; ESTABLISHMENT OF A DEPARTMENT OF VETERINARY MEDICINE.

We take pleasure in announcing that the chair made vacant by the loss of the lamented Prof. Rochester, has been filled by the election of Dr. Charles G. Stockton. The announcement already made public through the public press has given such universal satisfaction that we make no apology for editorially congratulating the Medical Department of the University upon their latest acquisition. Prof. Stockton brings to bear upon his new position talents of the highest order along with the peculiar gift of teaching, with which—like that of poetry—one is born, not made. In the position which he vacated in order to accept this his superior didactic abilities were easily recognized, and he was generally reputed to be by far the best teacher in the institution. He will henceforth have a very much wider field in which to display those energies which have won for him his new position. By all of the alumni who have known him well he will receive a warm welcome, while to those who have yet to know him we are sure he will quickly endear himself.

In another action, recently taken, also the University of Buffalo have reason to take a deep pride. This is nothing less than the establishment of a Department of Veterinary Medicine. This step has for some time been contemplated, but its announcement has been delayed till its affairs had assumed definite shape.

There can be no question but that Buffalo offers exceptionally good opportunities for the study of veterinary medicine, as well as the surrounding territory for its practice. With no school in the States nearer than several hundred miles it may well be wondered that it was not started years ago. The need for skilled veterinarians in a region so given up to fancy stock raising and the breeding of a superior order of animals, combined with the geographical relations of Buffalo and the absence of rival schools, and the fact that a number of noted stock-breeders have taken a particular interest in the new school,—all conspire to launch it upon a career which must speedily lead to conspicuous success. Our city has the finest veterinary infirmaries in the country, and these will be profusely utilized in affording clinical facilities such, perhaps, as no other school can offer.

The faculty, so far as announced, will consist of the following well-known gentlemen:

E. V. Stoddard, A. M., M. D., Professor of Materia Medica.
Roswell Park, A. M., M. D., Professor of General Surgical Pathology.
Julius Pohlman, M. D., Professor of Comparative Anatomy and Physiology.
F. P. Vandenbergh, B. S., M. D., Professor of Chemistry and Toxicology.
Nelson P. Hinkley, V. S., Professor of Veterinary Medicine.
John Wende, V. S., Professor of Veterinary Surgery.
R. C. Hutchins, V. S., Professor of Anatomy and Bovine Pathology.
Jno. F. Claris, V. S., Professor of Obstetrics and Parasitic Diseases.

It is expected that the new building to be devoted to the Veterinary School will be erected on the rear of the lot occupied by the medical school, and will be fully equipped in every particular. Further announcement of progress will be made in due time.

SURGERY OF THE HEART.

We have taken occasion to say more than once that we looked forward to the time when it would be the recognized practice to resect some portion of the anterior thoracic wall and suture wounds of the pericardium or even of the heart substance as much as it now is to make laparotomy and intestinal suture after certain penetrating wounds of the abdomen. Experimentally the way has been paved by the researches of Block, Gluck and others. In numerous instances the pericardium has been deliberately incised and then sewn together again without the animal showing any ill effect.

Further than this these experimenters have, after exposing the pulsating heart, inflicted various penetrating or incised wounds upon its substance, have then sewn it up, closed the pericardium and sutured the external wound, and still the animals have easily survived. What some dogs can stand some men can endure, and the inference is plain. In fact the pericardium has once or twice been sutured after it had been opened in extensive operations for malignant tumor of the chest wall.

But the most brilliant piece of cardiac surgery yet undertaken was reported by Stelzner at the last Congress of German Surgeons, and seems to have made an impression on the general medical world not at all commensurate with its importance. A young man in a drunken effort to commit suicide stuck an ordinary sewing needle into his heart. Only after twelve hours did any unpleasant symptoms supervene. Then he was seized with some pain and dyspnœa, and a loud pericardial murmur was heard at the apex. After thirty-six hours alarming symptoms occurred and the patient was in a condition of such collapse that any effort to save him appeared justifiable. No needle could be felt under the skin nor in the intercostal space. A portion of the fifth rib was resected and the left pleural cavity accidentally opened; then the pericardium incised and a small quantity of cloudy pericardial fluid escaped. Through this opening the needle could be felt embedded horizontally in the right ventricle. By pressure from fingers introduced behind the heart one end of the needle was pressed through the anterior cardiac wall; but the tumultuous action of the heart prevented Stelzner from seizing it with forceps before it suddenly disappeared, taking now a rather vertical direction. In spite of as much further effort as the circumstances seemed to warrant it was impossible to dislodge it from its new position. A further accident now happened: the indoform tampon with which the opening into the left pleural cavity had been plugged was aspirated into its interior, and could not be regained. The operation wound was then closed by suture and tampon, and the *complete recovery* of the patient followed, disturbed only by an acute pleurisy with effusion.

The patient was at the time of reporting the case apparently in perfect health, without heart murmur, peculiarity of pulse or disturbance of any kind. Whether the needle is still in his heart or has wandered into the mediastinum Stelzner cannot tell.

During the discussion it was brought out that Bergmann had also withdrawn a needle from the heart substance without having to make any resection of ribs.

While Stelzner will not at present find many imitators, it is most important that a knowledge of his experience may be widely disseminated in order that when such emergencies do occur men may be the more able and willing to cope with them.

THE PHYSIOLOGICAL AND THERAPEUTICAL EFFECTS OF MASSAGE.

Like so many other achievements of recent times, massage, or the method of treating disease by means of mechanical manipulations, had its origin among the Chinese. But, as in most other cases, the knowledge of the oriental native was wholly empirical, and, after reaching a certain point, remained stationary. Europeans, on the other hand, have advanced as they have through seeking for the first causes of phenomona. Thus, with massage: though the idea was borrowed from the East, where it had long been practiced, and perhaps, also, was known to the Greeks and Romans, yet it has been scientifically studied and employed less than a century. To Ling, a Swede, who lived from 1776 to 1839, belongs more than to any one else the credit of introducing it into modern therapeutics. Like all new methods it has been slow in becoming popular; but at the present day it is recommended and practiced by many of the most eminent of the medical profession, especially as a physiological explanation of results can now be given, and new applications constantly can be made on a rational basis.

Massage in large degree brings about mechanically induced absorption. This has been shown beautifully by some of Mosengeil's experiments. At 9 A. M. he injected both knee-joints of a rabbit, whose rectal temperature was 100°, with India ink. At 9.30 the right knee was manipulated. At 9.45 both joints were again injected with a weaker suspension of the powder, and the right knee once more kneaded. After manipulation the knee became of normal size again. At 3 P. M. the injections were repeated and the right knee at once manipulated. In two minutes its swelling had disappeared, while the tumefaction of the left was permanent. At 8.30 P. M. the rectal temperature was 104°. At 8.45 the knees were again injected, the left one holding but little in addition to the fluid it contained; the right was once more manipulated. Next morning also the procedure was once more repeated and both elbow joints were also injected and treated. The animal was then killed. The axillary glands were found to contain India ink, and the lymphatics leading to them were densely black. The ink was also distributed in the intermuscular septa and along the vessels. In the lower extremity which had been manipulated it was also seen that the ink had disappeared from the joint and had been forced upward into the circulation.

By these and other experiments he has been convinced that by means of massage cellular elements are first detached and are then disintegrated and disposed of by other, healthy cells, which act as phagocytes.

Intermittent pressure on a part, as is well-known, assists the circulation by forcing blood towards the heart through the veins, while its backward flow is prevented by their valves. In a similar manner the lymphatic channels, which likewise are provided with valves, are influenced. This method, especially through its acceleration of the lymphatic current, may be employed for the absorption of transudations, exudations, and extravasations, and even for the removal of vegetations and adhesions. By the same plan we increase the nutrition of tissues, and improve oxidation.

But probably the most valuable results of massage are the effects accomplished on and through the nervous system. It must be admitted that physiological knowledge in this respect is obscure. However, most authorities now agree in considering the transmission of impulses by nerves as performed by means of wave-motions in the molecules of the axis-cylinders. Upon this theory we can easily understand why nerves should be stimulated by heat or electricity simply by the transformation of those kinds of energy into the form peculiar to nervous impulses. And in a similar manner it is probable that mechanical motion is converted into nervous force. The possible applications of this principle are many. For example, by influencing the vaso-motor nerves either directly or through the sensory fibers of the same region, the vascularity of tissues may be controlled, and therewith the nutrition of parts, or the amount of secretion from glands. Or muscular action may be affected, and, in fact, theoretically, any part or organ that comes under the influence of the nervous system. Furthermore, muscle fibers are probably stimulated directly by mechanical applications, without the intervention of nerves.

The word "massage" is commonly used to cover all kinds of mechanical treatment. It is derived from the French verb *masser*,—to knead; and therefore, strictly speaking, refers only to a part of the mechanical operations. The manner of applying depends entirely on the nature of the case, and great opportunities are presented for the ingenuity of the doctors. There is no reason why any physician should not teach himself this process, though oftentimes it will be more profitable to hire a trained specialist. The class of diseases which are benefited by massage will be evident from the nature of its physiological effects. In the minds of too many medical men the idea of massage is associated with something pertaining to quacks and quackery. The same thing may be said of the influence of the religious press, in certain instances; but it is well to make as public as possible the fact that the term "massage" implies a rational and extremely valuable method of treating various and numerous diseased conditions, whose benefits are far too often ignored; and that there is nothing wrong or shaky about the system, no matter what may be wrong with some of those who purport to practice it.

THE EFFECTS OF COCAINE ON THE CENTRAL NERVOUS SYSTEM.

In a recent paper with the above title, Dr. J. R. Brower, of Chicago, makes known important facts concerning this now much abused drug, from which we extract the following:

> In small doses, that is, three or four drachms of the infusion, or one-half to one grain of the alkaloid, it is the most certain and agreeable of all cerebral stimulants. It increases the frequency of the pulse and respiration, and elevates the body temperature. It gives a sense of well-being, a freedom from care, and a pleasant mental exaltation. The first effect of the drug is upon the cerebrum, then upon the medulla oblongata, the sense of mental exhiliration preceding the stimulation of respiration and circulation. In small doses it also stimulates the spinal cord, producing a desire for muscular activity, and increasing activity of reflexes.

The effect upon the spinal cord, according to the experiments of Dr. Alexander Bennet, are due entirely to its effects upon the posterior column of the spinal cord; an observation that may make the drug useful in locomotor ataxia.

This increased activity of the central nervous system is usually followed by a quiet, composed, self-satisfied condition of the mind and body that eventuate in sleep. These agreeable effects are accompanied with loss of appetite, frequently with nausea, constipation and diminished activity of the kidneys, of the sexual functions and of the skin. In large doses, two to ten grains of the alkaloid, there are produced tinnitus aurium, photophobia, illusions, hallucinations, great loquacity, and a marked tendency of the mind to exaggeration and misrepresentation. If continued for some time this dose produces perversion of the affections, a disturbance of the moral emotions, a tendency to quarrel with friends and former associates, and to form alliances with persons formerly regarded as inferiors.

This state of the nervous system may become very like delirium tremens, with the same kind of muscular tremor, and the same kind of horrible hallucinations. During this time the loss of appetite and diminished activity of assimilation result in extreme pallor of the face, dryness of skin, extreme constipation, very much diminished urinary excretion, loss of sexual function, and great emaciation.

His conclusions are:

1. Cocaine in small or moderate doses is a cerebral stimulant, but produces derangement of the digestive and assimilative functions, and diminishes the elimination of waste.

2. The use of cocaine in the alcoholic and opium inebriates is not satisfactory; while it is a more or less perfect substitute, yet its use is attended with greater danger than alcohol or opium.

3. The use of cocaine in mental depression, if we carefully guard against the depressing effects of the drug upon digestion and assimilation, will often give better results than any drug hitherto used.

4. The use of cocaine in neurasthenia is a valuable addition to the treatment.

5. The drug, if administered in large doses persistently, causes a very marked deterioration of the central nervous system, producing a profound cerebral neurasthenia, and may produce such a mal-nutrition of the cerebrum as to develop insanity.

6. Cocaine, occasionally, in doses heretofore regarded as small, produces alarming depression of the central nervous system.

* * *

A PERSON trained to habits of exact observation can learn how to recognize the gonococcus from other bacteria of pus, but only very recently has an indubitable method of demonstrating its identity and of differentiating it from other similar forms been published. We refer to the method of Roux, which consists of first examining the suspected specimen with the ordinary outline blue stain in aniline water, by which the gonococci are conspicuously shown. Now, to prove that these *are* gonococci the same specimen is treated with Gram's iodo-iodide solution, which has the peculiar property of decolorizing these specific organisms and of leaving all others still visible. Accordingly these specific forms are now on reëxamination not seen at all; they have disappeared.

This is the method which Drs. Allen and Wendt, of New York, have carefully tested, and of which the former has published a full account in the *Journal of Cutaneous and Genito-Urinary Diseases* for March, 1887. It would now seem that the identification of the gonococcus could be practiced with as much certainty as that of the tubercle bacillus; all of which, of course, constitutes a real advance in diagnosis whose importance must not be underestimated.

* * *

AMONG recent losses by death among European savants are those of Gosselin and Friedländer. The former was one of the most esteemed teachers of surgery in Paris, whose clinical lectures were replete with information. The latter was a renowned pathologist, whose researches have been invaluable, and who was the editor of a journal which has done a great deal to advance German medicine, the *Fortschitte der Medicin.*

A NEW PHYSICAL SIGN OF THORACIC ANEURISM.—At a recent meeting of the Northumberland and Durham Medical Society, Dr. Drummond, of Newcastle, demonstrated a new physical sign which is likely to be of great diagnostic importance in thoracic aneurism. When a patient suffering from aneurism of the thoracic aorta is made to draw a long breath (inspired deeply) and then close the mouth and expire slowly through the nose, short, puffing, expiratory sounds are heard—synchronous with the systole of the heart—on auscultation of the trachea. Dr. Drummond believes this phenomenon to be due to the sudden systolic expansion of the sac expelling air from the chest. He has found it absent in cases of aortic valvular disease simulating aneurism, but has not yet thoroughly worked out the significance of the sign.—*Medical Press and Circular*, *October 17*, *1880*.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, June 7, 1887.

Reported by Charles G. Steele, M. D., Secretary.

Dr. J. B. Coakley presided.

There were forty-two physicians present.

Drs. G. H. Westinghouse, H. H. Bingham, Edward L. Gager and John T. Pitkin were proposed for membership.

Dr. Coakley announced the death of Dr. Thomas F. Rochester, for many years an honored member of the Association. He requested Dr. M. B. Folwell to read a paper, which Dr. Folwell had prepared for the occasion. Dr. Folwell read as follows:

"Whenever a member of this Association is taken away from us by death it is proper that we should put upon record the estimation in which he was held by his professional brethren and by the community in which he lived. Especially is it proper for us so to do when the deceased was one of such distinguished character and so long and so prominently identified with the Association, as was the late Dr. Thos. F. Rochester.

"At the time of his death Dr. Rochester was among the oldest members of this Association, having been connected with it since 1854. During all the years of his connection with the Association he was one of the most active and zealous of its members, laboring with his pen and his voice, with his knowledge and wide experience, for the promotion of its well-being. Whatsoever Dr. Rochester entered into he did with heart and soul; there was no lukewarmness in his composition. He believed in the need of this Association for the profession of Buffalo and he contributed as much as if not more than any other member to its perpetuity and usefulness. To Dr. Rochester we owe the written history of the Association from its beginning in 1845 to 1861. And in the proceedings of the Association during the whole period of his membership his name is always conspicuous among those of the few who were faithful to it in the days of its prosperity and of its adversity.

"Dr. Rochester was remarkable for his many-sided and harmoniously developed character. He had no weak side. He appeared to be equally strong in his intellectual, social and moral qualities. He was an able and successful teacher, a wise and skillful physician, a large-minded and public-spirited citizen, ever among the foremost in promoting the best interests of the community, and above all a man of the highest probity.

"His professional success was the necessary result of a happy combination of qualifications which he possessed in a marked degree;—A wide knowledge of medical science, a genial and winning disposition, a generous and sympathetic nature, a high sense of honor, perfect integrity, a robust constitution and an untiring devotion to his professional work. The qualities which contributed to his professional eminence and success made him also the admirable citizen he was, and the warm-hearted, true and steadfast friend. Stricken down in the zenith of his power and fame and in the full vigor of mature manhood, he was taken away at the very threshold of old age; a voluntary martyr to his unselfish devotion to the well-being of those who entrusted to him the care of their health and the preservation of their lives.

"Physicians like Dr. Rochester are very rare indeed. The record of such a life as he spent in this community is the most valuable legacy a man can leave behind him. We who are engaged in the active duties of our profession can have no greater encouragement or stronger incentive to well-doing than is given by the history of such a life."

On motion of Dr. F. W. Abbott the testimonial was ordered spread upon the minutes of the Association.

Dr. Herman Mynter read an interesting paper on "Skin-Grafting," which appeared in the July number of THE MEDICAL PRESS.

The paper was discussed by Drs. Harvey, Bartlett, Howe, Hopkins, Hayd, Heath and Campbell.

Dr. Mynter showed and read an account of two cases of resection of the elbow, which will be found on page 360 of this issue.

Dr. F. R. Campbell read an elaborate and carefully prepared paper on the "Etiology and Prevention of Summer Diarrhœa in Children." The paper contained a great many interesting statistics, and the doctor showed that climatic conditions have much influence on the intestinal disorders of children.

Dr. W. W. Potter was announced as the essayist for the July meeting.

The Association adjourned.

THROUGH the telephone: "Is that you, doctor?" "Yes; who is it?" "Mrs. Melony. O, doctor, what shall I do for baby? He has swallowed a dime?" "Well you surely don't want to spend two dollars to get a dime, do you?" and the telephone ceased working.—*Exchange.*

Selections.

Physiological Property of the Skin of the Neck.—Who has not read or heard of the story of the suicide of unfortunates, who, to put an end to their days, cut their throats with several slashes of the razor? Mr. Brown-Séquard, observing that the section interests very important nerves, asked himself how it is that there is not an atrocious pain intervening preventively at the very moment after the first cut? It results, however, from experiments he has made and which he submits to the Academy, that precisely this first cut has destroyed the sensibility, the effects of which might *a priori* be apprehended, and, at this occasion, the illustrious physiologist points out the curious properties of the skin of the neck. It requires only a section of small extension in the medica anterior region to see anesthesia spread on both sides more or less far, and even to the mediate posterior region; it even happens that the skin of the whole body is rendered indolent for a time of more or less duration. Connected with these same phenomena is the abrupt death which may be provoked by a more or less violent shock on the larynx. In this case, there is syncopal state by *cissation of exchanges*, as Mr. Brown-Séquard himself has termed it, and in the cadaver the arteries are found turgid with blood entirely red.—*Exchange.*

The Functions of the Soft Palate and Uvula.—In the *American Journal of Medical Sciences* for April, 1882, Dr. Whitfield Ward publishes a paper, in which he shows that the velum and uvula play an important part in the production of nearly every tone that issues from the vocal organs, and, without their proper action, singing is out of the question. During the production of tones that are emitted through the nose alone, the free border of the velum rests upon the dorsum of the tongue, thus shutting off all communication between the fauces and anterior buccal cavity, and increasing the length of the human musical pipe. If, during the intonation of certain notes, the pendulous velum should be pressed up against the pharynx, exactly the same effect would be produced as though a piece of the upper extremity of an organ pipe were to be cut off;

namely, the placing of the note higher in the scale. The physiology of the uvula is none the less remarkable, since very many of the actions of the velum are entirely under the control of this important little body, which acts as its supporter.—*Exchange.*

Rotter and Virchow on Charcot's Joint Disease.—At the meeting of the Berlin Medical Society on the 17th ult. a discussion took place upon tabetic arthropathy, which, it may be remembered, excited so much attention at our clinical society two years ago. Dr. Rotter, who opened the debate, described succinctly the clinical and anatomical features of the disease, with a view of proving its distinct identity, and the dependence of the articular changes upon nerve disorder. Professor Virchow followed in a long and careful speech, in which he acknowledged the similarity of the affection to rheumatoid arthritis, and traced the development of the pathological changes in the joints from hyperplasia of the cartilaginous investment, followed by regressive change and atrophy, ossification of the medulla leading to eburnation, hyperplasia, and ossification of synovial fringes, and ultimately of ligamentous tissues. These changes, he declared, were hardly to be regarded as inflammatory; but, although he admitted their dependence upon disordered nerve influence, he maintained that in each case there must be a local determining cause also at work. Other members also spoke, but we must postpone a full analysis of the debate to a subsequent occasion. Neurologists will note that Professor Virchow objects to the phrase "tabetic," and prefers that of "arthropathia tabidorum."—*Lancet, Dec. 11, 1886.*

The Brunelli process of embalming is thus described: 1. The circulatory system is cleansed by washing with cold water until the water leaves the body quite clear. 2. Alcohol is injected so as to abstract as much as possible of the water. 3. Ether is then injected to absorb the fatty matter. 4. A strong solution of tannin is injected. 5. The body is dried in a current of warm air, which is passed over heated chloride of calcium. The body is then perfectly preserved, and resists decay. In appearance it is like a wax model of the deceased. The time occupied varies from about eight to thirty hours.

Capsicum in Opium-poisoning.—One of the most important uses of capsicum has generally passed unnoticed. It is of decided value in the treatment of opium-poisoning. In the suggestion of its use in opium-poisoning, I can claim originality, but not priority. Dr. C. H. Hughes was the first to use capsicum enemata in the treatment of opium-poisoning. His case was as follows: A patient had taken opium with suicidal intent. Dr. Hughes being called in after atrophine and the usual routine remedies had been tried, ordered an enema of one drachm each of aqua ammonia and tincture of capsicum, using coffee as a vehicle. The patient made a complete recovery. In 1881 I was called to a case with the following history: A patient suffering from the insomnia resulting from a prolonged debauch purchased two ounces of laudanum and swallowed one. Within half an hour he sank into a deep slumber. Dr. E. C. Dudley was called, who, by means of the stomach-pump, relieved the patient of about half the laudanum taken. Dr. Dudley found that, despite the use of strong coffee and constant movement, the patient did not improve. He then called Dr. Jewell in consultation, who advised the use of atropine. Under all these varied means of treatment there were temporary rallies, but after six hours of constant treatment the patient seemed to sink into and remain in a deep coma. At this stage I was called in consultation, and having faith in the old theory of derivation, ordered three drachms of tincture of capsicum to be poured directly into the rectum. The effect was almost magical. The patient walked around briskly, talked freely, and in about an hour was in his usual condition, other than being much exhausted and suffering from great dryness of the throat obviously the result of atropine. The report of three similar cases similarly treated follows, the result in all being a rapid and perfect recovery.—*J. G. Kiernan in Medical Standard, February, 1887.*

Translation by Exchange.—Mr. C. B. Keetly reports in the *Lancet* a case of a hairy mole covering nearly the entire cheek of a young infant. If he removed it *en masse*, leaving the wound to heal by granulation, the resulting scar would be nearly as great a deformity as the mole. If he took a flap from the arm, to cover the surface, the wound in the arm would likely prove disastrously large.

He raised the mole as a flap, made a corresponding flap on the arm, brought the arm in juxtaposition to the head and fastened it there by plaster-of-Paris, attached the arm flap to the face and the mole flap to the arm, waited a few days until union of each had taken place, and then completed the operation by severing the pedicle of each flap. The result was excellent.—*Exchange.*

WHITE (H.) ON STATISTICS OF CEREBRAL TUMORS.—An instructive piece of statistical work has been contributed to the current number of *Guy's Hospital Reports* by Dr. Hale White, on the cause, operative treatment, mode of death, and general symptoms of 100 cases of cerebral tumor collected from the post-mortem records of Guy's Hospital. Ninety-nine of the cases occurred during the years 1872–84, both inclusive; the total number of necropsies was 5,850, or about 450 a year, which gives 1 tumor of the brain for every 59 that come into the post-mortem theatre. Of the 100 cases, the growth was tubercular in 45, gliomatous in 24, sarcomatous in 10, carcinomatous in 5, gliosarcomatous in 2, cystic in 4, gummatous in 5, lymphomatous in 1, myxomatous in 1, and of doubtful nature in 3; 34 of the tubercular cases occurred in the male sex. There is much useful information in the paper, but the chief drift of the investigation was to ascertain, as far as possible, how many cases could have been treated surgically after the fashion of recent times. The conclusion was arrived at that only 3 of the tuberculous cases could have been benefited by operation, that at the outside 6, and probably only 4, of the gliomata, 1 only of the sarcomata, none either of the carcinomata or of the gliosarcomata, perhaps 2 of the cysts, the myxoma but not the lymphoma, and 2 of the doubtful cases. Therefore, of the whole number of cases 10 might certainly have been operated upon, and probably 14. It will not be forgotten that before this number could have been treated surgically it would have been necessary to diagnose the seat of the tumor; even so late in the case as shortly before the death of the patient would suffice, whilst, of course, earlier in their histories many others might have been operated on with good prospect of success.—*Lancet, Sept. 25, 1886.*

A NEW COLLODION.—A new film-producing material which is said to possess many advantages over the time-honored solution of gun cotton in ether, is made, according to a writer in the *Union Pharmacale*, by mixing three parts of gum mastic in powder, and one part of balsam of Peru, dry, and dissolving the whole in five parts of chloroform. When an analgesic effect is desired one part of narcotine may be added to the gum and dissolved with the balsam in the chloroform. Silk or linen cloths may be soaked in the mixture and dried, and afterwards used as court-plaster.—*Exchange.*

TO ASCERTAIN WHETHER GANGRENE IS LIKELY TO FOLLOW SEVERE INJURY OF A LIMB.—Gently raise the limb, and keep it raised for two or three minutes, in order to empty it to some extent of blood; then apply a tourniquet or piece of elastic webbing, on the proximal side of the injury, and keep it applied for about a minute—lower the limb, remove the tourniquet, and if sufficient circulation remains, the part beyond the seat of injury will blush rose red, and will show in an unmistakable manner the condition of the blood-vessels. This procedure was adopted by the writer in a case of severe compound comminuted fracture of both bones of the leg. The limb was almost "dangling" and apparently hopeless, but after having adopted the process above described, it was observed that the dorsum of the foot blushed after the elastic webbing had been relaxed. The boy made an excellent recovery with a useful limb.—*Lang* (*W. S.*) *in Edinburg Medical Journal, January, 1887.*

THE POWER OF PHYSICS.

"Go, fetch the doctor, boy."—OLD PLAY.

I am a doctor, and I had to go
Last week to see a case of diarrhœa,
Most *dire* it was, and also in the *rear*,
A stercoraceous flux, a flood, a flow;
What started it I'm certain I don't know;
But I administered some physic queer,
And (as of course you will rejoice to hear)
The treatment checked the overflow of *Po* (!)
Yes, such astringents into him I popped
That *presto change!* his fluxes all were stopped,
And so effectually I dammed his tripes
He now damns *me* for stopping up his pipes,
Declaring that, as sure as fleas are fleas,
My remedy is worse than his disease.

F. BRADNACK, M. D., Buffalo.

Book Reviews.

A COMPANION TO THE UNITED STATES PHARMACOPŒIA. By Oscar Oldberg, Pharm. D., and Otto A. Wall, M. D., Ph. G. Second revised edition. Pp. 1216. New York: William Wood & Co.; Buffalo, J. H. Matteson.

A second edition of this work within three years of its first appearance bespeaks its appreciation by pharmacists and physicians. The title indicates its scope. Not as bulky as the dispensatories, not repeating the pharmacopœia but supplementing it; a very handy book of reference is secured.

Appearing after the pharmacopœia of 1880, the changes in formulæ and therapeutic strength are fully and yet concisely stated. The plates of crude drugs are most excellent and valuable reference tables are with great convenience placed on the cover pages. "All the principal drugs and chemicals are arranged in alphabetical order, and all the preparations of each drug or chemical are put alphabetically under it." The facility with which the reader can compose all the forms in which any medicine is exhibited is apparent.

An admirable chapter on the use of the microscope in pharmacognosy is a valuable feature. No one at all interested in the contents of the pharmacopœia can go amiss in placing this work in their reference library.

EVACUANT MEDICATION. By Henry M. Field, M. D. Philadelphia: P. Blakiston, Son & Co. 1887. Pp. 288. Price, cloth $1.75. Buffalo: Peter Paul & Bro.

As the author intimates in the preface of this little volume, "there will not be found either in English or the other familiar languages" a treatise on the practical study of the individual action, application and contraindications of evacuants *i. e.*, cathartics and emetics. In the ordinary text-book on materia medica and therapeutics very little space can usually be given to this class of drugs so that there really is a place for Dr. Field's book. In the first part of the volume he treats of cathartics taking up each drug separately, giving clearly and briefly its materia medica, special action and special uses, with some observations concerning administration. Then follows a chapter on differential therapeusis—short and to the point. But the most interesting chapter is the one on cathartic medications in which the mechanism of catharsis, its effect on nutrition, the indications and contraindications for, and the immediate and remote effects of cathartics are discussed in an interesting and suggestive manner. In the second part of the volume emetics are taken up and treated on the same plan. Here again the most interesting chapter is the one on emetic medication. It closes with a consideration of the arrest of supervomition, which, though seemingly out of place could nowhere be brought in more properly. Though vomiting is as a rule easily provoked, every practitioner must know how disappointing and difficult the treatment of obstinate vomiting is. In this chapter he will find many practical hints and suggestions. The little book is practical, well written and nicely gotten up.

ON THE PATHOLOGY AND TREATMENT OF GONORRHŒA AND SPERMATORRHŒA. By J. L. Milton, Senior Surgeon to St. John's Hospital for Diseases of the Skin; London. P. 484. Illustrated. New York: William Wood & Co. Buffalo: J. H. Matteson.

On the subjects above treated of Mr. Milton is probably the most entertaining and instructive writer we have to-day, and this book, which comprises his various monographs on these kindred topics, should be heartily welcomed by all. If the old saying be true, that gonorrhœa in the long run kills more patients than syphilis, and we see no reason to doubt it, then the disease assumes an importance which no remarks on its frequency or its comparative insignificance can do away with.

In the matter of the various complications and sequelæ of clap the book is unusually rich. Some of these, such as endocarditis, meningitis, synovitis, etc., are more or less rare, but on that very account are the more to be studied up when met with. In the matter of the specific bacteria of gonorrhœa the book is altogether too deficient; one finds in it nothing more than was virtually known five years ago. Either the author is a non-believer in its specific origin or he has neglected the literature of the subject.

His therapeutics are full, and his suggestions most practical. He alludes to the alarmingly large numbers of drugs that have been commended, and says the puzzle is not so much to find what will cure it as what will not.

The latter half of the book is devoted to spermatorrhœa, which he insists is something more than a mere symptom; and whose tendency to worry and alarm unfortunate patients we all acknowledge. He shows clearly that there is something beside nitrate of silver in the line of treatment, and lays great but not undue stress on proper hygiene and dietary.

In its new dress the work has a much increased value, and will well repay whatever time may be given it.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION FOR 1886.—Vol. III. Pp. 600. Edited by Dr. A. L. Carroll. Published for the Association.

The third volume of the State Association Transactions even surpasses its predecessors in both typographical appearance and literary merit. It contains, we believe, not a single inferior paper, while some of its contributions are of great importance. The establishment of a debate or discussion on three of the leading questions of the day was assuredly a happy idea, and the manner in which each was conducted should lead to a similar plan of work for the next session.

The President's address, by Prof. E. M. Moore, was devoted to the further elucidation of one of those subjects on which he speaks with such authority; Subluxation of the Radius in Children. The discussion on Gunshot Wounds of the Intestines was a memorable one; it was opened by Dr. Tremaine and continued by such men as Bryant, Bull, Varick, Nancrede, Dennis, Hamilton and Parkes of Chicago. Only next in importance were those on Pulmonary Tuberculosis and on Eclampsia, which were also conducted by men who are everywhere looked up to as authority.

We find in the volume also most entertaining papers by two of our fellow townsmen, Profs. Andrews and Stockton. Fine portraits of Flint, Hamilton and Gray, with suitable memoirs, also embellish the volume.

Taken all in all there is no more creditable volume of transactions published anywhere, or by any society, than that which we have just briefly noticed.

A MANUAL OF TREATMENT BY MASSAGE AND METHODICAL MUSCLE EXERCISE.—By Joseph Schreiber, M. D. Translated by Walter Mendelson, M. D. Pp. 285. Philadelphia: Lea Bros. & Co. 1887.

A most admirably arranged compendium concerning that of which as a rule medical men are woefully ignorant. If any one doubt that there is a scientific basis for massage, or that it is capable of effecting veritable wonders in certain cases (no one claims in all), let him procure and diligently read this book of Schreiber. It deals in effect with mechanotherapy, as a means of avoiding much of the dosage recommended by the teachers of the materia medica. It takes up and deals with such questions as: Can massage be learned without a teacher? To what extent can the general practitioner use massage, and how much must be left to the specialist? Can the human hand be substituted by apparatus? His conclusive answer to one of these queries is thus expressed: "Every physician having the inclination and ability, no matter where he may practice, may acquire, self-taught, and successfully employ the methods of mechanotherapy in the treatment of disease." He then goes on to give first the physical reason for employing these methods and then the manner and details of their application.

Many a young man would better his own condition as well as that of his patients if he would devote a part of his time to learning the system as here plainly taught. The book is admirable, dealing justly and intelligently, as it does, with a subject of the greatest importance.

BOOKS RECEIVED.

From Wm. Wood & Co., New York, through J. H. Matteson:
Gonorrhœa and Spermatorrhœa: J. L. MILTON.

From Lea Bros. & Co., Philadelphia:
Syphilis: JONATHAN HUTCHINSON.

Transactions of the New York State Medical Association.

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The Medical Press
of Western New York.

Vol. II. SEPTEMBER, 1887. No. 9.

INTUBATION VERSUS TRACHEOTOMY.*

By Roswell Park, A. M., M. D.
Professor of Surgery, Medical Department, University of Buffalo.

Gentlemen—Honored by your committee with an invitation to occupy a portion of your time this afternon I have thought it might not be amiss to discuss briefly with you the relative merits of tracheotomy and of intubation for the relief of the laryngeal complications which too often make croup and diphtheria such deadly diseases. And I do this the more willingly because intubation is such a new operation that there is, even now, much concerning it to be said to a general audience.

In 1801 Desault learned by accident that the respiratory passages could tolerate for some hours a tube passed by the natural route; his tube, which he passed through the nose, intending to introduce it into the œsophagus, going in reality into the treachea. Only when he tried to feed through it did he discover his mistake. Led by this he tried to catheterize the larynx; his first patient was improved temporarily but died the same day; his second, who had œdema of the glottis, recovered after retaining the catheter *in situ* for a day and a half. Since Desault's day many a practitioner has made the same endeavor, usually with little or no success.

The tube, more nearly as we now use it, is said to have been invented by Loiseau in 1858. But the credit of working with it belongs to Bouchut, who reported seven cases of intubation, of which five died and two recovered only after tracheotomy. Gros' efforts in the same direction were also futile. A commission having been appointed by the Academy of Medicine to examine and report upon the new method reported through Trousseau, their secretary, very adversely, and the weight of Trousseau's authority was, at the time, such that Bouchut's views and methods were practically condemned. The controversy thus engendered became a very bitter one. The failure in Bouchut's plan lay in the size and dimensions of the tubes he employed; they were only 18-24 mm. ($\frac{3}{4}$ inch) long, and a third as wide; in other words, only large enough to irritate. They were, moreover, attached to a thread which was left to hang out of the mouth.

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* Being the substance of a brief address before the Alumni Association of the University, March 1, 1887.

The plan condemned by Trousseau was not put into practice again for nearly twenty years; though in Gibson's surgery may be found a sentence which implies that something of the kind seemed feasible to him. It was merely tried in Vienna by Weinlechner in 1870, and by him commended, but it was quickly discouraged by Steiner and Von Ziemssen.

In 1880 McLean, of Glasgow, once more resorted to the catheter in the larnyx, with its end hanging out of the mouth, but he was not generally followed.

The sole credit of intubation as now practised belongs to Dr. Joseph O'Dwyer, of New York, who worked assiduously and quietly for several years before his method was so perfected that it was safe to publish it. He has told me that he tried intubating, with tubes of various devices and sizes, *seventy-five times* before he scored a success. Think of the marvelous patience and unflagging zeal of the man who is willing to try any method so many times without giving up in despair! And join with me in saying, All honor to that man who *did* succeed on the seventy-sixth attempt, and through whose labors so many little patients have been saved! The first article in which attention was called to O'Dwyer's work was written by Dr. Brush, of Mt. Vernon, N. Y., and published in *The N. Y. Medical Record* February 21, 1885. With unusual modesty the real originator of this grandly simple procedure has refrained from much writing, and has allowed others to herald forth his methods and his results. Of late there has been no lack of papers upon this and kindred topics, and I think we may fairly say that the operation is now fully accepted upon its merits. It has won, for instance, the recent encomiums of Jacobi, who a little while ago unhesitatingly condemned it, and many of its earlier opponents are now falling in along with its friends.

Statistics.—Although statistics are not always accurate nor reliable, we may yet glean some good by glancing at a numerical presentation of the subject. In the matter of tracheotomy for croup and diphtheria we have about these figures:

Trousseau reported about	25	per ct.	of	successes.
Cohen's tables based on a study of 5000 cases	25	"	"	"
Jacobi, based on 1000 cases	30	"	"	"
Agnew, based on 1,100 cases	30	"	"	"
Recent German hospital reports	31	"	"	"
Waxham, 306 Chicago cases by various operators	19	"	"	"
Hodgen and Mudd, 171 St. Louis cases	27	"	"	"

Still more remarkable are such individual reports as those of Cohen's *one hundred and sixty-six cases with* 69% *saved*, and C. T. Parke's *thirty-one* cases, of which *eighteen* (57%) recovered; his youngest patient, however, being three and a half years of age.

On the other hand compare these with such individual reports as one operator with twenty cases, another with fifteen, a third with fourteen cases, and not a single recovery. For my own part I have opened the trachea in at least ten of these cases, all of them desperate, without ever a recovery. To be sure, immediate relief was gained, but they all died of cardiac failure, or of sepsis incident to the disease, and I have failed to save one by tracheotomy. It is furthermore stated that a certain New York surgeon years ago recorded sixty-seven cases with thirteen recoveries, and that after his sixty-seventh case he operated *one hundred times* before having another success.

From about eight hundred reported cases of intubation we get about *twenty-eight per cent.* of recoveries; which, for a new operation, performed so often amongst most unfavorable conditions, is a most excellent and encouraging showing. My own results in a dozen cases have been practically as above, and I go to a case of this kind now with very different feelings from those which used to almost compel me to have nothing to do with any such patient. Passing now to a comparison of the relative advantages and disadvantages of the two operations, we will first consider the—

Advantages of Tracheotomy.—1. Purer air is inspired through the external tube than through infected nostrils and fauces. This may mean at least the prevention of septic pneumonia, especially if Cheyne's suggestion be carried out, *i. e.*, to plug the epiglottic space with antiseptic gauze.

2. As a rule there is little, if any, difficulty in deglutition; this means, in effect, that nutrition can be better accomplished,—and this, when possible, is of the greatest importance for the case. Especially can stimulants be easily given.

3. The trachea, being exposed, can be more easily cleaned.

4. After tracheotomy it is rather exceptional to find the false membrane extending upwards into the fauces.

5. The external opening can be kept patulous as long as may be desired.

6. The tube when plugged is easily removed.

The Disadvantages of Tracheotomy.—1. The inherent difficulties of the operation. It is alluded to in some of the text-books as a simple one, and so it is on the cadaver, and sometimes in actual practice; but sometimes it is as trying and difficult as anything we are ever called upon to do. I may have had an unusual experience in this line, but such as it is it has made me approach a case calling for this operation with more of a certain uneasiness than almost anything that I can recall. In fact, as my friend Dr. C. T. Parkes, of Chicago, has most aptly said, "The history of tracheotomy is replete with horrors."

2. The time required; this may vary from a few moments to an hour or more, which latter to the agonized parents will seem an age. There is also not rarely more or less shock.

3. A considerable wound is left, which may also become infected, erysipelatous, etc.

4. Constant attention must be given to the tube. Those only who have watched these cases can appreciate the full force of this objection. Furthermore, this attentiveness frequently makes such demands upon the intelligence of the nurse that the odds are many times against the patient.

5. Still further, care must be given to the patient's surroundings; the air of the room must be kept moist and warm, and many little things must be attended to which may severely strain the family resources.

6. The danger of lobular pneumonia is increased rather than diminished.

7. No small amount of after treatment is required; this may extend over a long period of time.

8. There is usually great difficulty in obtaining consent for the operation, and particularly while there is still any hope.

9. An anæsthetic is required unless the patient be comatose, when, of course, the case is well nigh hopeless.

10. Finally, the difficulty occasionally met with, of closing the external opening after the tube has been some time worn; or the opposite condition may be met with and the patient's life be jeoparded by granulation stenosis.

The Advantages of Intubation.—1. The operation is virtually bloodless.

2. There is no external wound to become infected.

3. Rapidity with which it is ordinarily effected. Intubation can hardly be termed a simple or an easy operation until skill has been acquired by practice. In very small throats it will always be difficult. It calls for a skill in manipulation in the pharynx which few possess without training; nevertheless, when properly done it is the work of but a few seconds, and appears easy just in proportion to the dexterity with which it is performed.

4. The shock caused by its introdution is momentary.

5. Much less after-care of the tube is required. The tube *may*, to be sure, need to be two or three times removed and replaced, but this is little when compared with hourly care which the tracheotomy tube sometimes requires.

6. Less attention is necessary with reference to the warmth and moisture of the room's atmosphere. The patient breathing still through the natural passages is not placed at any disadvantage in this respect.

7. The danger of pulmonary complications is in no wise increased; save that if the nose or pharynx be badly infected septic air is inspired, and this may be at least a theoretical source of trouble.

8. Much less after-treatment is required.

9. There is much less trouble in gaining parent's consent.

10. No anæsthetic is required.

The Disadvantages of Intubation.—1. There is always some, and at times there is insuperable difficulty in feeding the little patients after intubation. This is more marked at first than later, a certain degree of toleration being soon gained. If ordinary intelligence and some patience be at first manifested this may be largely overcome. Still, the passage of a stomach tube (an English catheter answers admirably) or a few days' nourishment by enema will overcome this inconvenience in part or in whole.

2. According to Dr. Strong, of Chicago, leaving the tube too long in place may lead to such reaction and over-action after its removal that œdema of the larynx (œdema glottidis) may rapidly supervene. This proved disastrous in one of his cases.

3. Crowding down dislodged false membrane has been the worst and apparently most fatal accident consequent to the operation. This, in almost every instance, has necessitated immediate tracheotomy. This happened to me in two cases, neither of which could I save. (*Vid.* cases III. and IV.) It has also happened twice to Dr. Strong, of Chicago, once each to Dr. Hance, of New York, and to Dr. Fergusson, of Troy, and three times to Dr. Mudd, of St. Louis; two of the latter's cases were saved by opening the trachea.

4. The possibility of losing the tube. When the tube has disappeared the inference has more than once been that it has passed below the larynx. Thus Dr. Montgomery, of Philadelphia, and Dr. Eichberg, of Cincinnati, have each once opened the trachea for the recovery of lost tubes; neither, if I am informed aright, being successful; in one of the cases, at least, the tube was later passed by the rectum. This danger is not theoretical when the tubes are properly selected, *i. e.*, when a large enough tube has been passed. But when the right tube is chosen it cannot pass downward. It must be remembered that the flange of the tubes *does not rest on the true vocal cords*, but on the false ones, above the true. So even if the head should pass below the false cords it would be arrested by the true. The fact just italicised also will explain why tubage of the larynx does not cause ulceration of the true cords; it is the ventricular bands which bear the weight. But a tube may be coughed far enough into the mouth and then be swallowed, or a wayward child may hide it or throw it away. In some such way did the tube disappear in my Case II.

5. The possibility of sudden plugging of the tube by a piece of false membrane and speedy suffocation. This has happened to Dr. Wheeler, of Burlington, Vt., and to Dr. Barker, of this city. In milder degree this happens once in a while, the consequence usually being a violent expulsive effort and the extrusion of the tube. According to Mudd the tube is more easily expelled by cough when there is no tracheal nor bronchial obstruction than when they exist, since the muscular act of violently coughing is performed to better advantage.

From what I have thus far said you will perceive that my own preferences are much in favor of intubation, and when I compare my results by the two methods it would appear that I could scarcely have them otherwise with any appearance of discretion. You will please remember that in all that has been so far said reference has been made exclusively to operation for diphtheritic or croupous laryngeal symptoms. Tracheotomy will always have a certain field in which it cannot be compared with any other procedure; and the introduction of the tubes will probably supplant the use of Schroetter's laryngeal dilators; but for relief of acute laryngeal stenosis they certainly are rivals, with O'Dwyer's new method well in the lead. It must especially win the honors in the cases of children under three, in whom tracheotomy shows a fearful death-rate.

Reference has already been made to their relative difficulties. Nothing can be much easier *for one who has learned the technique* than the introduction of the tube in a simple case; yet Dr. O'Dwyer has expressed himself to me very positively that intubation is not an operation for Tom, Dick and Harry to try indiscriminately, and I, certainly, from an experience of fifteen cases, have no reason to differ with his views in this matter. In the infantile pharynx the manipulation is quite difficult. The tube being in place, the next perplexity is met with in deciding how to feed and what to give. The attendant must study the idiosyncrasy of each little patient, and should watch him for some time after placing the tube. There is probably nothing equal to ice cream, given carefully in very small quantities, as a steady diet for two or three days. Whatever stimulants are required can be mixed with it. If this cannot be swallowed then the child must be fed either by stomach tube or by rectum.

Repeated efforts to make a child swallow when they each time make him cough or struggle are certainly injudicious and should be forbidden. Much can be done by a few hours' education, and the child who can take nothing to-day may be abe to swallow the cream tomorrow.

I submit herewith some account of my own recent cases. The operation has been so often and so well described by others that it is unnecessary here to speak of it in detail.

PERSONAL EXPERIENCE WITH INTUBATION.

Case 1—Child of two and a half years; a patient of Dr. Bartlett's. Had had croup for several days, which on August 29, 1886, became very much worse, suffocative symptoms setting in. On that day I made my first intubation. Relief was perfect. Death followed after eighteen hours, from convulsions, the mother stated; according to her account there was not the slightest return of the dyspnœa.

Case 2—Boy of six years; patient of Drs. Harrington and Long. Had had croup for several days; during the night of September 2, 1886, became much worse. At 7 A. M., September 3, with their assistance I introduced the appropriate tube. Relief was immediate. The child lived about a day. After its death Dr. Long and I endeavored to recover the tube. No trace of it could be found, not even after opening the trachea and probing it to its bifurcation. Neither could the family tell us anything concerning it.

Case 3—Girl aged four years, at Bradford, Penn. Patient of Dr. F. H. Murdock, who on September 6, 1886, telegraphed me to go to Bradford to make a tracheotomy for diphtheria. She had been sick with it for about a week. Two older sisters were both sick with it at the same time. The dyspnœa began the day before I was summoned. About 11 P. M. I found child with the most pronounced dyspnœa, and already somewhat cyanotic. After three ineffectual trials, each of which, with the tube properly *in situ*, seemed to make her worse, and the last of which left her in very bad condition, I made a low tracheotomy, resorting to Martin's method without the tube. The child lived four days, and died apparently of exhaustion, simply because she was so spunky she would not eat, while her parents had little, if any, control over her. If they had forced her nutrition as they ought I think she might have recovered.

Case 4—Boy of five years; a patient of Dr. Campbell, who asked me to make an intubation for him on September 30, 1886. Child had had diphtheria for a week, hoarseness for three days, and dyspnœa for eighteen hours. In this case I made four trials, each time getting the tube in place, but without any relief. The child was excessively difficult to manage, so I abandoned attempts at tubage and proceeded to a tracheotomy under chloroform. Death on the second day, apparently from septic intoxication. The surroundings were execrable, the case being down on Maiden Lane.

Case 5—Boy of five years; son of Dr. Eugene Storck. He had had whooping-cough for a fortnight, and had been more or less "croupy" occasionally. Dyspnœa and dysphonia for two days. November 30, 1886, I introduced the suitable tube, with the assistance of Drs. Storck and Niemand. Relief was prompt. On December 2, he coughed out the tube, and did not require its replacement. Convalescence and recovery rapid.

Case 6—A baby of ten months, at the General Hospital, extremely reduced and marasmic. Symptoms of diphtheritic laryngitis set in early in the morning of December 20, 1886; by 9 P. M. the dyspnœa was urgent. With considerable difficulty the tube was introduced, the infant's pharynx being so small that manipulation was almost impossible. Relief was instantaneous. Death nine hours later of exhaustion and heart failure.

Case 7—Boy of six years; patient of Dr. A. M. Barker. With Dr. B. I saw him December 22, when the fauces were seen to be full of diphtheritic membrane, but the character of the breathing did not then call for tubage. During the evening of the 23d this became necessary and was done with Dr. Barker's assistance. During the next few days the doctor withdrew and replaced it twice. The lad made a noble struggle for life but succumbed to sepsis a week later, his nose and fauces being filled with fœtid membrane, which was discharged or drulled over everything that he came in contact with.

Case 8—A boy of five years; also, a patient of Dr. Barker. He had been "ailing" for a week, but had been about the house; for several days had been breathing badly. January 8, 1887, dyspnœa became pronounced, though there was but little membrane visible in the fauces. With Dr. B.'s aid I easily introduced a tube, but he immediately became cyanosed. Hastily withdrawing it I found it plugged with a firm piece of membrane. After cleaning I re-introduced it with perfect and immediate relief. In due time Dr. Barker withdrew the tube. The child was scarcely confined to bed. Recovery.

Case 9—Infant of fourteen months; a patient of Dr. Jewett's; sick with scarlatina anginosa and severe croupal symptoms.* Had been seriously sick for two days, and dangerously so for eight hours. With the doctor's astistance introduced the smallest tube December 31, 1886. Instantaneous and complete relief. Death ten hours later of exhaustion and sepsis.

Case 10—Girl of two and a half years; patient of Dr. Dwyer's. Child sick for a week, but had had dyspnœa for only twenty-four hours. It was first seen in the urgency of this by Dr. D., who sent at once for me. January 1, 1887, at 9 P. M., with his help, intubation was done. Relief instant. January 3 the child had a prolonged convulsion, but was free from dyspnœa. January 4 I removed the tube for experiment, but had to replace it within fifteen minutes. January 5 she died of exhaustion.

Case 11—A girl of seven and a half years was sent to the General Hospital by Dr. Pearson. She had had diphtheria for five days, and had been under the care of a quack. Dr. P. found her in extreme dyspnœa and telephoned in haste for our ambulance. I was awaiting its arrival at the hospital, and lost no time in introducing a tube without the slightest difficulty. Her agony for breath was immediately relieved and her cyanosis soon disappeared. This was February 6, 1887. Three days later I took the tube out during one of my public clinics, and did not have to replace it. Speedy recovery.

Case 12—A babe of six months in one of Dr. Tobie's families. Three other children were sick at the time with diphtheria. This infant had been for several days coughing. Symptoms of laryngeal obstruction set in during the morning of February 28. At nine in the evening I introduced the smallest tube with the assistance of

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* Speaking of such cases Settegast says, "Cases of recovery are so rare as to be mentioned individually," and Cohen has remarked they are not amenable to operation.

Drs. Tobie and Phelps. Relief was prompt, but the child died the next day of exhaustion. In this case I removed the tube an hour before the child died since it seemed to be obstructed.

Case 13—A girl of thirteen months; patient of Dr. Bartlett's. Child had been sick with membranous croup for three days; getting rapidly worse on the third day Dr. B. asked me to make intubation. This was done March 10, 1887. Dyspnœa was extreme. Aided by Dr. Bartlett and Dr. W. B. Davis, U. S. A., the tube was introduced with the promptest relief. Three days later the tube was removed and did not need to be replaced. Recovery very speedy.

Summary of Personal Cases.—I have given above the essential points of thirteen cases, of which four recovered, *i. e.* 30. + %. I am aware that is not a large enough number from which to draw sweeping conclusions, so I simply contribute them to the several hundred already on record, only adding that so far as one could forsee not one of them would have recovered if left alone; and furthermore, so far as my own observation goes, not one of them could I have saved by tracheotomy. In six of them there was no hope of accomplishing anything at the time of the operation; it was done as one performs many a kindly office in professional life, in order that family and family physician might acquit each other of any possible charge of having omitted anything, no matter how forlorn a hope it might offer. Beside the cases above reported I have in two others introduced tubes, just as a means of euthanasia in one case, and as a legitimate experiment in the other. In the first the patient, a young lad, was dying of a malignant form of dipththeria, and his father, a physician, begged me to introduce a tube simply to allow his breath to pass away in a manner less agonizing to his mother. This was, of course, accomplished, and death ended the sad scene within an hour. In the second case I was asked by Dr. Dayton to see with him a boy of eight who was dying of membranous croup. On our arrival we found him profoundly comatose, cyanosed, pulse imperceptible, heart could be heard faintly beating, respirations ten to the minute. Without loss of a moment's time I introduced a No. 4 O'Dwyer tube. Within one minute his pulse was perceptible; within five it was regular and of fair volume, and his respiration rate normal; and within fifteen minutes he was conscious and could whisper, and soon could expectorate and swallow a little. It was a beautiful resurrection as of one dead, but the case was essentially hopeless; he lived thirty-six hours and died apparently of exhaustion and œdema of the lungs.

Surely it is not fair to burden the statistics of intubation with the results of such essentially fatal cases, and I have accordingly not included them in the summary of my results.

NOTE.—Since writing the above I have just had another fatal case of intubation in the case of a young girl of three years whom I saw with Dr. Hopkins, July 29. She, too, was unconscious, cyanosed, and very near to death when we saw her. Immediately upon the introduction of the tube she revived, and when we left the house we considered that she had a barely possible chance for life. But she died eleven hours later of exhaustion, without any return of dyspnœa.

A CLINICAL STUDY OF THE THIRD STAGE OF ANÆSTHESIA.

BY EUGENE A. SMITH, M. D.
House Physician, Buffalo General Hospital.

The third stage of the action of chloroform and ether is inadequately described by the authorities on anæsthesia.

Turnbull says:* "One of the best tests is when the conjunctival surface of the eye can be touched with impunity, and the arm, when raised, will fall as if paralyzed."

Lyman gives no credit to ocular signs. He says:† "The limb (an arm raised) will fall like an inert mass. The indications thus obtained are more reliable than the results of touching the conjunctiva."

Pye has it:‡ "The patient is ready when in addition to the loss of reflex action of the conjunctiva there be also general relaxation and more or less snoring."

And Brunton, the physiologist, thus describes this period:§ "The third stage differs from the second in the functions of the spinal cord being abolished as well as those of the brain, and the most common way of ascertaining whether this stage has set in or not is by drawing up the eyelid and touching the conjunctiva. If no reflex contraction of the eyelid occurs the anæsthesia is complete."

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* The Advantages and Accidents of Artificial Anæsthesia. Page 22.

† Artificial Anæsthesia and Anæsthetics. Wood's Library. Page 33.

‡ Surgical Handicraft. Page 393.

§ Pharmacology, Therapeutics and Materia Medica. Page 188.

It is not difficult to prove that these conflicting descriptions of the operative period of anæsthesia are either insufficient or too sweeping.

Patients undergoing operations about the eyes, genitals, arms or abdomen struggle fiercely when anæsthetized only by Lyman's rule. The arm will fall quite relaxed long before the very sensitive reflexes are abolished in these regions. On the other hand, to push the agent to paralysis of the sensory centers connected with the conjunctiva is too deep an effect. In the great majority of cases it is inviting danger and shock to carry anæsthesia so far. Perfect muscular relaxation with abolishment of the ordinary reflexes and loss of both tactile and painful sensations can be obtained without so profound an impression on the central nervous system.

In administration I use the following rule: Abolish the reflex muscular movements of the trunk, then push the agent to dull conjunctival sensibility until reflex contractions of the orbicularis (palpebrarum) are slight and to cause the pupils to contract. This rule is based on a subdivision of the third stage which I make as follows:

I. End of second stage—muscular relaxation.
II. Third stage.
  1. Conjunctiva quite sensitive, pupils dilated.
  2. Conjunctiva less sensitive, pupils contracted.
    a. Reflex from both eyes on irritating one.
    b. Reflex from each eye alone.
    c. Corneal conjunctiva alone sensitive.
  3. Schneiderian membrane sensitive, conjunctiva insensitive, pupil contracted.
III. Fourth stage.
  1. Stertor with wide dilatation of pupils.
  2. Death. { *a.* Chloroform—from syncope.
    b. Ether—from asphyxia.

When anæsthesia is induced as the authors quoted direct, we see that subdivisions 3 of II. and 1 of III. are all the visible phenomena that separate the patient from death. This is manifestly a dangerously narrow margin, and if satisfactory anæsthesia can be induced with more of the subdivisions of II. remaining, it is plainly a duty to discard any rules to the contrary.

That satisfactory anæsthesia can be thus made safer, a reference to the table below will show. These administrations were for major as well as minor operations and were continued for periods of fifteen minutes to an hour and a half.

II. Third stage.

	Patients.
1. Conjunctiva quite sensitive, pupils dilated	8
2. Conjunctiva less sensitive, pupils contracted	90
3. Conjunctiva insensitive, pupils contracted	2

In the first of these classes the patients were not far enough under for uninterrupted operative work. One vomited, one had retching, three struggled, two were momentary operations, and only one was a true exception. She had an old bone abscess cavity curetted, was thirty-five minutes anæsthetized and yet the pupils did not contract.

In the second class of cases, ninety per cent. of my patients are included. Manifestly, the first class, with the one exception noted, should have been carried into this number.

The minor subdivisions under heading 2 (see above) are of practical use in holding the patient in the anæsthetic state and also in guarding against overadministration.

As for the third class, one of the two cases had had blepharitis and conjunctivitis, thus dulling conjunctival sensibility. To the other, a child, I gave too much chloroform, for two days later when anæsthesia was again induced it was maintained with the conjunctiva sensitive.

My fellow members of the present house-staff at the General Hospital have used the rule. Dr. W. H. Bergtold, ex-house-physician, has applied it with success in the fifteen cases he has had since last December. Dr. William Meisburger, jr., junior assistant, whose duty it was to administer anæsthetics during the last five months, followed it in his last eighty-five cases, and in only two cases did he carry the action to insensibility of the conjunctiva. In his first twenty cases he followed no rule and the results were unsatisfactory.

Thus a total of two hundred cases shows that four were anæsthetized to insensibility of the conjunctiva, one hundred and ninety had sensitive conjunctiva with contracted pupils, and eight unsatisfactory cases had more sensitive conjunctiva with dilated pupils.

These figures prove that the proper condition of the patient in the third stage is described under heading II.

The phenomena of the rule are explained physiologically by Brunton. Early, he says, the pupil dilates because the partly venous blood stimulutes the dilating center in the medulla; as the stage deepens the more venous blood sedates this center and contraction occurs. In asphyxia, again, sudden dilatation occurs because the intensely venous blood fiercely irritates the dilating center or paralyzes the contracting center.

The conjunctiva loses sensation as its sensory centers become dulled. When sensibility is quite gone the patient approaches close to asphyxia, owing to a special nerve supply, no doubt. Pye states what I have frequently observed, that the reflex from the cornea is more sensitive and persistent than that from the surrounding conjunctiva.

In conclusion, when a patient is once brought under this classification, the danger of anæsthesia and the consequent anxiety of the administrator are lessened in direct proportion to his watchfulness. The eye being slightly sensitive and the pupils contracted, the administrator has only to add the agent from time to time in small quantities. Insensibility of the conjunctiva, abolishment of nasal reflex, and stertor with sudden dilatation of the pupils are successive evidences of over-administration. On the other hand, dilatation of the pupils with increasing conjunctival sensibility, muscular twitching or reflex spasm, retching or vomiting indicate that the person is emerging from the third stage.

The Destruction of Gonococci.—Tinsley claims that morphine is destructive to the gonococcus, and that it will cure a case of acute gonorrhœa in from twenty-four to forty-eight hours. He uses the following formula:

℞ Morph. sulph., ʒi.
Aqu. rosæ, f℥ii.
M. S.—Inject four to five times daily.

The urethra is to be well filled and the injection to be retained twenty minutes. This will allay all local pain and painful micturition. In six cases this simple treatment proved a success.—*Amer. Practit. and News, May 14, 1887.*

CARDIAC MURMURS.

BY CHARLES CARY, M. D.
Professor of Anatomy, Medical Department, University of Buffalo.

[Read before the Buffalo Medical Club.]

The subject chosen is a trite one upon which a great deal has been written, and in order to handle it successfully the writer must offer some original features or accumulated statistics or his article will, like hundreds of others, be deserving of only momentary consideration. I sincerely hope the subject will invite full discussion, and familiar as it is to most of you, I think you will with me rate it as one of those important themes which we do well to take up from time to time and review so as to maintain our familiarity with it. I do not expect to offer anything that is absolutely new, but there are several points which have occupied my thought and attention which I think I can present in such form as will be of benefit to us all. The classified arrangement of over 770 cases may prove of value by furnishing one more grain of material upon which to establish the relative frequency of the different valvular lesions of the left heart. To offer a complete essay upon cardiac murmurs, a complete review of our present knowledge of the subject in the time allowed would be impossible; I have, therefore, been obliged to curtail so as to confine the reading of my paper to the allotted time.

Before touching upon murmurs let me briefly review the elements which enter more or less into the production of the heart's sounds. The current of blood through the heart is effected by alternate contraction and relaxation of its muscular walls, these being called respectively the systole and diastole of the heart; and although the heart itself is in one of two conditions, either that of contraction or relaxation, still to the auscultator the sounds emitted have led the cardiac cycle to be divided into three periods: the period occupied by the first sound, that occupied by the second, and finally the third period of repose or silence. This division is a rational one, although it does actually divide the time occupied by the contraction of the different portions of the heart, and so causes us to lose sight of the condition of the heart itself in the production of sound. The entire revolution occupies usually something less

Table showing Occurrences in and about Heart during one complete revolution as arranged by Dr. Charles Cary.

Normally.

3d or Silent Period.

Auricles full and later contracting.

Auriculo-Ventricular Valves open.

Ventricles distended.

Semilunar Valves shut.

Aorta undistended.

Abnormally.

A

When the Auriculo Ventricular openings are obstructed, there is

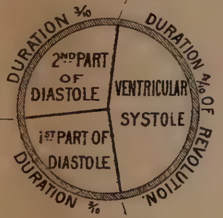
I. Tricuspid obstructive murmur, heard over Ensiform Cartilage.

II. Mitral obstructive murmur, best heard to right of Apex.

B

When the Semilunar Valves are very deficient, there may be

A Pulmonic or an Aortic regurgitant murmur, as in 2d period, I. and II. A.



Normally.

and Short or Diastolic Sound of Heart.

Muscular Walls relaxed.

Arteries recoiling on contents.

Semilunar Valves shut and vibrating.

Auriculo-Ventricular Valves open.

Auricles filling and Ventricles beginning to fill.

Abnormally.

A

When the Semilunar Valves are insufficient, there is

I. Pulmonic regurgitant murmur, best heard over 3d left Sterno-Chondral junction.

II. Aortic regurgitant murmur, best heard over 2d right Sterno-Costal junction and transmitted down and to the left.

B

When the Auriculo-Ventricular orifices are obstructed, there may be

I. A Triscupid obstructive murmur, best heard and usually only heard in next period.

II. Or a Mitral obstructive murmur, best heard and usually only heard in next period.

Normally.

1st Long or Systolic Sound of Heart Produced.

Walls of Ventricles Contracting.

Striking of Apex against chest.

Auriculo-Ventricular Valves, shut and vibrating.

Opening of Semilunar Valves

and

Rush of Blood from Ventricles into Arteries.

Abnormally.

A

When the Auriculo-Ventricular Valves are insufficient, there is

I. Tricuspid regurgitant murmur, heard at Ensiform Cartilage and transmitted up and to right.

II. Mitral regurgitant murmur, heard at Apex laterally and behind.

B

When the Arterial orifices are contracted or irregular, there is

I. Pulmonic obstructive murmur, heard at 3d left Sterno-Chondral junction.

II. Aortic obstructive murmur, heard at right and Sterno-Costal junction and in cervical arteries.

C

When the Ventricular surface is roughened or abnormal, there is

I. Ventricular murmur heard only at Apex.

[The elements which enter into the production of the Normal Heart Sounds are underlined.]

G H Dunston, Lith Buffalo, N Y

than a second in time; this, however, may be somewhat increased, or again very much reduced, but either in rapid or slow action of the normal heart the periods occupy relatively about the following proportions of the entire revolution. The first sound, which is the longest, occupies four-tenths of an entire revolution; the second sound three-tenths, and the period of silence three-tenths. During these periods the accompanying diagram shows what is transpiring in and about the heart. The material forming this chart is gathered from the most recent authorities on this subject, and the general plan is a modification of that of Alexander Silvers of Aberdeen, who divided the complete action of the heart into four periods, with what object I am at a loss to determine.

It can be plainly seen from this diagram that there is a very complicated lot of elements entering into the complete heart's action, any one of which may modify the normal sound, but most of them are so unimportant in the production of sound as not to be detected in health, and are of so little practical pathological import as to enable us to discard them as elements in the production of murmurs. In health the only features which can be separately distinguished are, during the systole the muscular sound, the valvular sound, produced by the closure of the tricuspid and mitral valves, and the striking of the apex against the chest wall. The second sound is plainly valvular, and is produced by the closing of the pulmonary and aortic semilunar valves. The third period is silent. An experienced auscultator learns to recognize a normal proportion between the different elements of sound, which in the aggregate make what is known as a normal sound. This knowledge can only be gained through a studied experience, and is of great advantage, for it frequently enables him to detect a murmur before he hears it. This seems like an Irish bull, but what I mean is that the relative proportion which enters into the heart sound in any one region, the relation, for instance, between the muscular and the valvular sounds, or the valvular sound and apex blow, etc., become so familiar that if any element is disproportionate or accentuated, the acumen of the auscultator enables him to recognize this disproportion and so assign the cause. When turning to another regional part he hears the murmur which he already suspected would be present.

The rushing of blood and the sound of open valves cannot be heard in health, and are only appreciable as the result of abnormalities or disease. Murmurs are due to the loss of that perfect mechanical freedom, which normally enables the blood to flow with the least possible resistence through the heart and arteries. The sound of a murmur, therefore, is always caused by the rushing of the blood, which is made to vibrate or which sets into vibration tissues which transmit the sound to the auditor. The change, then, from normal is either in the blood itself or in the channel through which it flows. The quality of the murmur varies greatly, and we try to designate its character, or cause, or both, by defining it furthur as harsh, musical, rasping, churning, sawing, rattling, blubbering, blowing, grating, flapping, cooing, etc. They are also designated as a systolic, or diastolic, or presystolic murmur, depending upon the period when they are heard.

To turn now to the discussion of special murmurs I invite your attention to aortic obstructive or stenotic and aortic direct murmurs. These terms are generally used as synonymous, although they are quite different in their significance. If obstruction is the essential cause of the murmur it should be designated a stenotic or obstructive murmur; but, on the other hand, if this state cannot be established, it is more properly styled a direct aortic murmur, and, again, if it is ascertained that the cause is not a serious obstruction, it may with more accuracy be styled a direct non-obstructive aortic murmur. This distinction should certainly be made when possible, for the prognosis, as far as the heart is concerned, is dependent entirely upon the degree of obstruction. A bruit that is induced only by a slight roughness, or by a blood condition, will not give rise to a provisional hypertrophy or any of the resultant cardiac conditions.

In the list of cases taken from Andrew Clark's tables this murmur is second in frequency; in my own list it is third. Alfred L. Loomis also places it second.

This murmur is produced in the outward flow of blood from the ventricle into the aorta, and may be due to a contraction of the ring-like margin of the aortic orifice, or to an uneven distention of the ventricle below the margin, or to a dilated aorta, or to any roughness of the valves or endocardial surface in the neighborhood. If it be due to the cause first mentioned, viz., a real obstruction, there are eddies and counter currents formed by the rapid propulsion of the blood through the contracted narrows, and these, with the very rapid stream rushing along the center of the artery, produce, as can be conceived, a tossing and tumbling of the arterial column of blood, which is eventually spent upon the elastic walls of the latter, but not so near the heart but that it is heard as a harsh rattling bruit over the base of the heart, or, perhaps, where the aorta comes nearest the thoracic wall at the second costo-sternal junction; the column of blood shares in this violent agitation, and the sound is therefore usually heard also in the subclavian and carotid arteries. It is heard synchronously with the ventricular systole, and is usually louder on the right side of the neck owing to its being nearer the seat of its production. The pulse in the earlier stages is unaltered, nor is the lesion appreciable at the pulse unless there be heart failure.

The sound at the apex would also be modified in a real obstructive lesion at the aortic orifice. This modification would be an intensified first sound, the muscular and valvular elements being increased, and the duration of the sound prolonged. This change should attract the attention of the auscultator and direct his examination to the base where the murmur would be heard if it had not already been detected. If the murmur on the other hand be caused by a roughened surface or a vibrating valve margin, without much real obstruction, then the sound is usually more cooing or musical or high pitched. This class would not induce a provisional cardiac hypertrophy, with its long chain of accompanying complications, nor would the muscular sound at the apex be modified for the reason that the power is not required to overcome much obstruction; but, on the other hand, if it be the free margin of the valve which gives rise to the bruit, the same lesion would be apt to cause an aortic regurgitant murmur. It is, however, impossible to gain an accurate knowledge of the lesion from the sounds alone, for certain it is that at times slight obstruction produces loud and misleading murmurs, and conversely serious obstruction does not always give rise to loud murmurs, but the resultant manifestations can rarely mislead a careful and experienced observer. The resultant symptoms can be developed only by obstruction; if it be slight it may be completely overcome by muscular hypertrophy of the heart, and by thus reëstablishing the equilibrium the obstruction, and the hypertrophy will remain *in statu quo* till advanced age or other cause terminate our history of the case. If on the other hand the balance be not established, if the obstruction be great, the hypertrophy increases to a point beyond which it cannot go, and then dilatation begins; in any stage, however, the equilibrium may be gained and the progressive changes cease or become very slow, or the patient may abstain from laborious occupation, and so retard its progress. If the case, however, be a progressive one, the next step is a slight muscular enfeeblement due to dilatation, these conditions prevent a complete emptying of the ventricle, its discharge of blood is not equal to what it receives, and there is permanent dilatation. This is demonstrated to the observer by a disproportion between the size of the heart and the intensity of the sounds, by a compressible pulse and impaired circulation in the extremities. Later the left auricle becomes distended from not being able to discharge its contents completely, and with its distention the pulmonary circulation is retarded and the capillaries engorged; there is now an increased *besoin de respirer* and a bronchial catarrh, which but increases the distress. The right side of the heart now feels the obstruction, and the chain of causes which operated to induce alterations in the left heart begins to become operative in the right. Finally the systemic veins are engorged, there is fullness of the cervical veins, chronic congestion of the softer glands, and œdema of the feet, with later general anasarca and death. It is obvious that this chain of symptoms, both objective and subjective, can be directly traced from the first lesion, and the rapidity of their development will depend upon the degree of obstruction at the aortic opening. The murmur will, as a rule, not remain single. The alterations in the size and muscular tone of the heart give rise to other valvular abnormalities and bruits, which are readily detected as they develop.

The next lesion is aortic regurgitation, or insufficiency, or incompetency, or inadequacy, or aortic reflux. The blood flows backward from the aorta into the ventricle. In Sir Andrew Clark's cases, as analyzed by the writer, it is fourth in frequency in single valvular lesions. Dr. Loomis places it third; in my cases it was fourth.

Mitral, double and combined murmurs are probably more frequent than simple aortic regurgitation. The murmur is due to one of two causes, either a deformity of the valves, brought about by traumatism, rheumatic endocarditis, atheroma, endocarditis,—or to a dilatation of the aortic opening, which renders the valves too small and admits of a leakage.

The murmur is rarely harsh. It is usually a blowing murmur of varying degrees of intensity, but intensity is one of its most constant characters. It may be heard over the base of the heart, at the right second costo-chondral junction, also usually in the cervical vessels, and transmitted along the sternum, it is *often* heard its full length, or through the heart it is also heard at its apex. When heard at this latter point it is not transmitted through the blood as claimed by some, unless the murmur be very long in its duration and the ventricle has had time to be partially filled. It accompanies and immediately follows the second sound. Like most bruits it is transmitted in the direction of the flow of blood which produces it, that is, downward from the base. Let it be borne in mind that the ventricle forces blood into the aorta against a force which is represented by the elasticity of the arterial walls, particularly the elasticity of the aorta, and that, with the completion of the ventricular systole, the aorta has attained its maximum distention. At this moment the blood flows back towards the ventricle and is checked by the closing of the semilunar valves; it is then at this instant, while the ventricle is empty and the aorta most fully distended, that a slight regurgitant murmur is heard transmitted from the aorta to the sternum and through the heart's substance to the apex.

If the leakage be slight the resultant changes are slow, or may even never be developed. If, on the other hand, the leakage be considerable, then the regurgitation induces a ventricular hypertrophy by forcing blood into it, not only in full quantity from the auricle, but also in additional quantity from the aorta. This hypertrophy will be rapid or slow, great or slight, depending upon the quantity of unlooked-for blood. The size of the left ventricle may become very great, and the weight of the heart may reach twenty, thirty, or rarely forty-eight ounces. The thickened and dilated ventricle throws increased quantities of blood into the arterial system with each pulsation, and induces dilated arteries, which are almost as rapidly emptied by the capillaries at one end and the regurgitation at the other. The erudite touch can detect the collapsing, splashing locomotive, water hammer pulse, which is characteristic of this lesion. The sphygmograph yields a high, straight upstroke, with almost as rapid and complete downfall, before indicating the aortic notch and small secondary waves, which may in grave cases be absent, showing no maintained arterial fullness.

This same distention of the arteries enables the auscultator to detect the heart's sounds at a point far removed from the heart, but unaccompanied by the murmur, the sounds being transmitted directly through the column of blood; but owing to the rapid emptying of the arteries the vibration of the murmur, which otherwise would be conveyed, is at once lost.

This lesion, when severe, will induce rupture of the arterial walls or sudden death from cardiac paralysis. Venous fullness, dropsy and anasarca do not occur until the ventricular dilatation has induced a mitral insufficiency. Undoubtedly the diminished and brief tension of the aorta interferes with the nutrition of the heart through the coronary arteries, and thus expedites its dilatation and final failure.

[TO BE CONTINUED.]

AN ERROR IN DIAGNOSIS.

BY F. BRADNACK, M. D.,
Buffalo, N. Y.

It is not often that even a layman commits so curious an error in diagnosis as the one I am about to relate. A young man of twenty consulted me, complaining that he was suffering from "the itch." Upon questioning him as to how he contracted it he replied that some weeks before he had slept in the same bed with a man who had had the itch for some time. After this history I physically examined him—not only his hands, but his entire body. At the conclusion of my examination he inquired: "Well, doctor, I suppose this disease *could* be taken by sleeping with a man, could it not?" Whereupon I replied: "The disease which you have could, in my opinion, only be taken by sleeping with a *woman!*" At this reply he at first appeared greatly astonished, but after some hesitation confessed that about two months before he had, on one unlucky night, made his first entrance into a house of ill-fame.

What I found in examining him was a well pronounced Hunterian chancre, with marked induration of the inguinal glands on both sides, together with a squamous syphilide not only on the hands, but *nearly all over* the body. This (due to the fact that it at times itched slightly) he had concluded was "the itch." Until very recently he had not noticed either the chancre or the indurated inguinal glands.

He had consulted a quack, who, after charging him nothing for treatment, but $5.00 apiece for two bottles of "medicine" (?), frankly confessed that "it was hard to say what was the matter with him."

To my mind the only *hard* thing about the case was the induration at the base of the chancre. This patient is now upon a vigorous anti-syphilitic treatment, and may meantime, for a year or two, console himself with the poetic and philosophic reflection that "to err is human"—not only in the field of morals, but likewise in the even more difficult field of medical diagnosis.

SONNET: TO THOMAS SYDENHAM.

> Sic te scientum non faciunt libri
> Et dogma pulchrum; sed sapientia
> Enata rebus, mensque facti
> Experiens, animusque felix.
>
> EDWARD HANNES,
> *On Sydenham.*

SYDENHAM, most meet it is that thou art clept
England's Hippocrates: to thee by right
The name belongs; thou didst first put to flight
Those falsities which on our art had crept,
Instructing those who sought pure truth, to accept
That method which alone could lead aright;
Thou wast, therefore, a new and guiding light,
And in thine art a most profound adept.
Thou did'st for physic what wise Bacon did
For general science,—*taught men to observe:*
From physic's eye thou raisedst its shut lid,
And drewest a straight line through error's curve:
No scholar bred by Isis or by Cam
Hath for mankind done more than SYDENHAM.

Buffalo, 1887. F. BRADNACK, M. D.

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BUFFALO, N. Y., SEPTEMBER, 1887.

THE QUESTION OF EXERCISE OR REST IN CASES OF HEART DISEASE.

The treatment of chronic heart troubles is undergoing a radical change. It used to be rest and inactivity; now action, exercise and work are advocated. Only cases of valvular lesions or fatty heart, however, are said to be adapted for such treatment, and in these it is thought that by well regulated work alternating with rest, the heart is better nourished and therefore becomes relatively stronger.

The old law of physiology that muscle work necessarily increases the rapidity of the pulse, does not seem to hold good in every case. Actual experiments have shown that the impulse of both the normal and diseased heart is increased in vigor and the number of beats lessened by active but calm muscle contractions accompanied by quiet and deep breathing. Franz (VI. *Kongress für innere Med.*) thinks that therein lies the secret of success of this new therapeutical measure inaugurated by Stokes. He argues that it is not the amount of work a diseased heart does that causes mischief, but the manner in which it is done. Hasty, incomplete contractions, which never entirely empty the distended ventricles, allow no pause in which effete materials can be thrown off, and thus exhaust the heart muscle, while vigorous contractions emptying the ventricles and relieving them of harmful pressure are followed by a larger diastole and rest the heart muscle in spite of the fact that more blood enters the heart cavity. Of course a lengthened diastole can only then rest the heart when it is yet able to contract vigorously. If moderate exercise thus increases the vigor of the contraction and lengthens the diastole by stimulation of the vagus center from increased arterial pressure, and the residual blood left in the heart cavity is gradually decreased, the cause for dilatation is also removed, while at the same time increased arterial pressure thus produced increasing the speed of the blood current, more oxygen is absorbed and carried by the red corpuscles, the abdominal circulation carries more nutritive material and the general health is improved accordingly.

Thus muscular activity has the same effect as digitalis, without the danger of the unpleasant effect of the latter when used too long.

Of course exercise during digestion can only be harmful and it will be found beneficial to follow the general rule laid down by Leyden not to allow them to take large meals but to eat little and often, and that such patients must neither stand nor lie down after eating, but must sit.

Any moderate exercise from light gymnastics to climbing of hills will do, but should always be undertaken in the presence of a physician, at any rate for the first few times.

CONCERNING SALOL.

The claims for salol are that it is a local disinfectant when applied to the skin and mucous membranes, and an antipyretic when administered internally. It seems especially adapted as a substitute for salicylate of soda and antipyrin in acute rheumatism of joints. Dr. Otto Seifert writes in the *Centralblatt für Klin. Med.* that he has used it extensively in solution for irrigation, and recommends it highly as a mouth wash and gargle, particularly in cases of ulcerations of various nature in the mouth. He had excellent results in cases of injury and ulceration of the tongue, hard and soft palate and larynx. So, too, after the use of the cautery. He also used it in a case of diphtheria of the tonsils and fauces, and says it was remarkable to see how the tough membranes were dissolved in three days and not reproduced. In all these cases either chloride of lime or salicylates had been used, and the effect of the change to salol was rapid and striking. It was, moreover, borne well by all the patients.

Dr. Seifert uses an alcoholic solution of 6.0 salol to 100.0 alcohol.

A teaspoonful of this was put in a glass of warm water and used frequently as a gargle or wash. He has also used it in the form of powder in cases of rhinitis atrophicans fœtida, after operations in the nose, and for tubercular ulcerations of the larynx. But the results have not been as encouraging; for, though antiseptic, it seems, like boric acid and antipyrin, to be very irritating to some patients. But the chief objection to its use for insufflation is that it will not stick to the mucous membranes as it should. The only powder that has done well in his hands is iodol, and that seems to be admirably adapted except that it is expensive.

THE PATHOGENIC PROPERTIES OF THE BACILLUS OF TYPHOID.

Since the discovery of the bacillus of typhoid and its causative relation to the disease, it has become a question of growing interest whether the number of bacteria found in the organs of persons dead with typhoid stand in any direct relation to the intensity of the symptoms, and how long the bacillus may exist in the body. As regards the first question nothing definite is yet known, but there is some light on the second. A. Fraenkel (Berlin) reports the following interesting case:

In the middle of December, 1885, a baker, æt. 20, was admitted to his clinic in Berlin with typhoid of a typical form. The course of the disease was at first complicated with lung disease, so that it was quite long before he entered the remitting stage. After about seven weeks of declining fever he had a relapse with symptoms of diffuse peritonitis, but recovered in a few days. During the recovery he had facial erysipelas and another attack of peritonitis. Four months after the beginning of the disease a fluctuating abscess formed in the lower part of the abdomen. An exploratory puncture brought to light a peculiar pus-like chocolate colored fluid with a mouldy odor, which contained besides pus and blood corpuscles a very large quantity of hæmatoidin crystals and bacilli, which on culture experiments proved to be exclusively typhoid. The patient was operated on, and a litre of the same fluid was removed. Later on he died of ileus. At the post-mortem the knuckles of intestine were found firmly adherent to each other; there were no perforations nor signs of infarcts or rupture of the spleen. Fraenkel believes that the abscess and peritonitis were caused by the bursting of a softened messenteric gland, and refers to parallel cases reported by Griesinger.

This case is interesting for two reasons. First, because it shows that under circumstances the bacillus of typhoid can remain in the body much longer than was ordinarily supposed. Second, it teaches that the same bacillus, which undoubtedly possesses the power of causing inflammation, can also under certain circumstances produce pus formation. This observation, though seemingly strange, is exactly what we know of some other pathogenic bacteria; for instance the bacillus tuberculosis, instead of producing ordinary specific disease products, may produce suppuration; so with the coccus of genuine croupous pneumonia, isolated by Friedlander, which may cause empyæma. Of course the pus produced by these bacilli differs in many respects from the *pus bonum et laudabile* of the authors and which is produced by the staphyloccoci and streptococci. Fraenkel has also made some interesting inoculation experiments with the bacillus of typhoid on animals. The pure culture was injected into the duodenum of thirteen guinea pigs. Eleven of these died before the ninth day, and in all of them the bacillus could be demonstrated in the messenteric glands—never in the blood. Three died on the ninth and tenth days after the injection, and in them Peyer's patches were strikingly changed. From the late death of the animals and the finding of the bacillus in the glands Fraenkel concludes that the bacillus of typhoid has infectious as well as toxic properties, though they are not very pronounced. The symptoms of the animals cannot be compared with those of typhoid in man. The author hopes to find some better way of inoculating, and expects more marked results.

STENOCARPINE: THE NEW LOCAL ANÆSTHETIC.

In the *Medical Record*, of July 30th, Dr. Claiborne reported some experiments with an alkaloid which Dr. Seward, of Bergen, N. J., had separated from the leaves of a Florida tree known to the people as the "tear-blanket" tree. He found it to be not only strongly anæsthetic when applied to mucous membranes, but even analgesic when applied to the unbroken skin. In the same journal of August 13th, Dr. Knapp reports some of his studies with the new alkaloid, which corroborate all of Dr. Claiborne's statements save its effect on the surface of the skin. He found it to be a singularly powerful poison, since on injecting a minute quantity into the vein of a rabbit, the animal fell dead instantly; in fact he says he never witnessed such sudden death. Consequently he hesitated to inject any of it under the human skin. It is a powerful mydriatic, standing between atropine and homatropine in its power of paralyzing accommodation.

It has been dubbed *stenocarpine* without good reason, and its name will probably be changed when the exact botanical name of the tree from which it is produced is determined. It is now excessively expensive, one fluid ounce of a 2 per cent. solution costing six dollars.

On reading the first notice of its action by Dr. Claiborne we procured some of the above solution from Dr. Seward, and have been making a series of clinical experiments with it, confined to the nose, throat and urethra. We find it in a 1 per cent. solution fully equal to a 2.5 per cent. or 3 per cent. solution of cocaine, being also a trifle more rapid in its action. Local anæsthesia is very quickly produced which is fully as persistent as that caused by cocaine. But with Knapp we find that in the fauces, and even in the nose, it produces a disagreeable sensation of dryness, if freely used, which lasts for hours, and is quite like the effect of atropia. It seems, however, admirably suited for urethral work, where its effect is speedy and kindly.

It will doubtless find a large sphere of usefulness so soon as it can be put upon the market at a reasonable price.

THE staff of the General Hospital at their last meeting introduced a most timely and commendable resolution, to the effect that twice a month they would convene at the hospital to examine and discuss such cases as might present points of interest, for purposes of mutual improvement and study. If we mistake not this is an innovation in Buffalo, and we hope it will not soon fall into desuetude. We doubt not that any of the profession of the city who manifest a desire to that effect could be accommodated and would be welcomed at these meetings.

And this leads us to say that the practitioners of Buffalo are very slow to take advantage of the opportunities offered them twice a week during the clinic term, to see the cases and operations presented before the class. Such neglect of opportunities comes either from pure apathy or from failure to realize the richness of the clinics; it speaks, in either case, poorly for their interest in the medical affairs of the town.

* * *

THE following piece of sublime misinformation has been perpetrated by a homœopathic physician of Montreal as a *bona fide* report of a case:

> "Called to see Miss U——, suffering from usual periodic headache; gave *Lach.* 75 m. (Fincke), and then dissolved a few No. 8 pellets of *pure sacch. album* in half a glass of water, *churning it well* with a spoon (potentizing it, I fear); dose, a teaspoonful every half-hour till better. . . . Soon after taking the *sacch. alb.*, she became 'deadly sick and faint; thought she would *die*, *she was so weak*, could not lift her head; *felt as if she would sink bodily right through the bed.*' Each dose made her so much worse that she stopped it, and was able to come down stairs. . . . This is the first time I had such a symptom from *sacch. alb.*, but still it was too marked to pass on without making a note for verification, either clinically or pathogenetically. I know I had pure sugar pellets and fresh water." . . .

We can't help wondering whether the Examining Board of the Province of Quebec have applied their final tests to this gentleman, and if so how he stood; also, whether he could pass the civil service examination here.

* * *

The forty-second course of lectures at the Medical Department of the University of Buffalo will open September 20th. Dr. H. R. Hopkins will deliver the opening address at the college, at 8 P. M. The prospects for a full class are excellent, and the college was never in such good working order as it will be during the ensuing term.

* * *

The many friends of Prof. Mann will deeply regret to learn that he has been ill with typhoid fever in a distant city. He went off for a vacation with his family, and while ministering to one of his family who was seized with the fever was himself taken down with it. Fortunately he has been under the excellent care of Dr. Shattuck, of Boston, from whom we learn that the course of the disease in his case is not severe, and that there is every reason to hope that he will be able to resume his duties at the opening of the college year.

Correspondence.

LETTER FROM. PROF. POHLMAN.

The Annual Meeting of the American Association for the Advancement of Science.

New York, August 17, 1887.

Editor Medical Press—The meetings of the American Association for the Advancement of Science which closed yesterday illustrate very forcibly how little interest the physicians of America take in scientific research. New York City with her six medical schools of different creeds, two post-graduate schools, and upward of 2,500 physicians did not present one solitary paper to the Biological Section of the Association. But, after all, when such leading medical journals as the *New York Medical Record*, as late as last fall, was ignorant of the existence of such a body as the American Association, we can hardly be surprised at the indifference or ignorance in such matters of the rank and file of the medical profession. The fact exists, though it seems strange because, of all the professions, none derives more benefit from the advances of scientific research than the medical. Among the 711 members registered there were *fourteen* physicians from New York City, a very small percentage indeed; but we may throw the benefit of the doubt into the balance and think that the well-known modesty of the average medical man has prevented a number from adding the M. D. to their names on the official register, and in that case the percentage will be as large as we please.

A paper read by Dr. Chas. Porter Hart of Wyoming, O., deserves the attention of the medical profession; and an accumulation of statistics to prove or reject the theory advanced would be very desirable. Dr. H.'s address was upon the correction of certain mental and physical conditions in man. He stated that while the mind undoubtedly exerted a large influence over the body, so conversely the latter wielded a vast power over the former, although exact data as to the direction in which this power is exercised are but few. His attention had been called to the subject by observations that patients who suffer from some forms of abdominal disorder as a rule express their opinon with extraordinary positiveness and bitterness on all subjects; following this line more carefully he found that patients suffering from chronic diseases of the abdominal regions were generally pessimistic, while those suffering with chronic diseases of regions above the diaphragm were of an optimistic disposition. A classification of the different diseases examined by him resulted in the following per centages: Bronchitis gave 96 per cent. of optimistic patients; phthisis, 97; heart disease and asthma, 80 per cent. each. On the other hand, diseases of the liver gave 80 per cent. of pessimists, dyspepsia 91; kidney troubles 61 per cent. Of rheumatic patients he found 79 per cent. optimistic, but among people suffering from dropsy only 63 per cent.

Although "figures never lie," we all know how misleadingly they can be utilized, especially in statistical enumerations; hence it is to be hoped that a few medical men will take up the matter for verification or rejection.

"The pineal eye", recently mentioned in this journal, received confirmatory evidence from Prof. E. D. Cope of Philadelphia. He described the skull of an extinct saurian with three well developed orbits, of which the middle one on the top of the head evidently had been in communication with the pineal gland. The other two eyes had to all appearance been unable to see upward on account of the overhanging and projecting brows. The question which puzzles investigators in regard to these interesting discoveries is: Did these animals originally possess one, two or three eyes? for in the development of the brain the pineal gland appears before any of the other sense organs are differentiated, and that would lead to the assumption that these animals commenced with one eye only; on the other hand so many cases of retarded as well as accelerated development are on record that we can afford to await for additional evidence before forming any definite conclusion about the visual organs of these animals, and additional investigations and discoveries will undoubtedly shed the necessary light upon the subject.

As the section of biology discusses all papers relating to botany as well as zöology, anatomically as well as physiologically, it is rather difficult to select papers of direct interest to the physicians. The Association meets next year in Cleveland, beginning the last Wednesday in August. POHLMAN.

Translations.

A HISTORIC REVIEW OF ŒSYPUM, AND THERAPEUTIC EXPERIMENTS WITH LANOLINUM PURISSIMUN ANHYDRICUM.

By N. Wulfsberg, M. D., Christiania, Sweden, in the "Therapeutische Monatschrift."

TRANSLATED BY ERNEST WENDE, M. D., B. S.,
Lecturer on Dermatology, Medical Department, University of Buffalo.

It has often occurred in the history of materia medica that certain improvements or new theories have nullified a whole series of ancient methods; while later investigations have proven that this decision was premature, and have taken some of these old experiences and reproduced them in a modern light, and gained for them later and better consideration.

Such was the case with the fats. The ancient physicians had brought a great many into use, and established for them a goodly number of special and intricate distinctions. When, however, organic chemistry taught the very similar composition of all these, the old system seemed useless, and we confined ourselves to the use of tallow, lard, wax, walbrath, train-oil, and an economical selection of vegetable oils of various consistencies.

It has only been in the last few years that Prof. Liebreich has undertaken to pave the way for the brilliant re-entrance of wool-fat into the domain of medicine. I need here not expatiate upon the various particulars of his comprehensive investigations, which still are fresh in the memory of all; I intend, however, to reproduce a few of the less frequently read observations of the older literature, in order to further develop the fact briefly noted by Liebreich that wool-fat, under the name of œsypum or œsypus, had an extensive medical application for many years.

We owe the first complete communication to Dioscorides (Materia Medica, lib. II., cap. LXVI.). Since his elucidation is so complete, it will not be out of place to translate the passage entirely.

The fat of the raw wool is called by the Greeks œsypus. It is prepared in the following way: White soft wool, which had not been treated with soap wort*, was washed with warm water. After the impurities had been passed out, it was placed in a basin with a wide top. Water was poured upon it and vigorously beaten with a spoon till it foamed, or stoutly stirred with a stick, so that the greasy foam might be gathered in large quantities, which was immediately whitened with sea water, and the fat which had been floating on the surface of the water, and finally settled, was placed in another earthen vessel. The water in the basin was again stirred and the froth again covered with sea water, and the fat removed as before. This process was repeated till all the fat had been eliminated and froth could no longer be produced. The wool-fat which had been gathered was kneaded with the hands, and all adhering impurities immediately removed; the water gradually pressed out and rewashed in fresh water. This manipulation was continued till a bit of it placed on the tongue when slightly contractile proved no longer astringent, and had a fatty and white appearance. It was then placed for safe keeping in an earthen jar. All this was done in the hot sun. Some washed the skimmed fat with cold water, and rubbed it with their hands, as women do their wax-salves, by this means a whiter substance was produced. Others boiled the wool over a slow fire, after it had been washed and freed of dirt, in a copper vessel of water, gathered the floating fat, and washed it in the manner just described. After straining it was put in an earthen saucer of hot water, covered with linen, and placed in the sun till it had become white and sufficiently hard. Others threw away the water after two days and poured in fresh.

Good wool-fat is lubricous, and, when unadulterated with soap wort, smells of the raw wool. Œsypus has a stimulating effect, fills up ulcers, and mollifies when applied with melilotus and butter to the anus or pudenda; mixed with goose-fat it heals sores on the ears and genital organs; besides it is an effective remedy for sore lids, swollen cheeks, and decimation of the eye-lashes. It may be heated in a new jar until all the fat has exuded, and then reduced to ashes; the soot being gathered is regarded as a useful drug for affections of the eyes.

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* Die Saponinhaltige Wurzel von Gypsophila Struthium, L.

This exposition of Dioscorides requires no additional explanation. He describes what he has seen, and discovered by experiment, with that soundness, completeness and clearness which has given his writings, despite all linguistic peculiarities, the true stamp of classicality.

Although Celsus (*De medicinâ*), whose fifth book is concerned with medical remedies, does not mention œsypum in the pharmaceutic-dynamic part (*de simplicibus facultatibus*), it is met several times as an ingredient of various prescriptions in the special therapeutical parts. Under remedies for inducing suppuration emplastrum telrapharmacum (*ceræ*, *sevi*, *picis*, *resinæ*, *āa*) is discovered, and then emplastrum enneapharmacum, of whose nine ingredients œsypus, besides butter, ox-marrow, wax and tallow, are the form-giving components. Then we find œsypum as the chief ingredient of a salve for fissura ani. This salve also contains a cerate prepared with oleum rosæ. Another malady of the same locality requires an addition of chalcitis* to this ceratum rosaceum cum œsypo. Galenus occasionally mentions œsypus, but is of the opinion that is has no advantages over any other form of fat. (Vgl. Spielmann, Institutiones materiæ medicæ; Argentorati, 1774, S. 138.)

Œsypus is also described in the natural history of the elder Pliny. He is also acquainted with the process of decoction and bleaching in the sun, and notices as a distinguishing quality that œsypus rubbed and washed with water does not become fluid, but white like carbonate of lead. According to him, the œsypus derived from Attic sheep is the best. It is, however, noticeable in this as in other observations of Pliny, that he weaves in everything that he has ever read, and withholds his own opinion. Principally, too, in his therapeutic animadversions does the incisive mind of the natural historian become prominent in that he is sometimes inclined to show the absurdity of certain methods of treatment.

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* Ein als Escharoticum benutztes Mineral, welches in Bergwerken aus den Grubengewässern u. a. a. st. efflorescirt, und hauptsächlich aus einem sehr unreinen Eisenostrial besteht.

It is not a matter of surprise, therefore, that he is the author of the suggestion that œsypus is as much the product of the impurities taken up by wool as of the sweat of the sheep. From these citations we may conclude that wool-fat was principally produced in certain localities. Very likely in such where soap or soap-wool was not used in washing sheep. No change of any kind seems to have been introduced during the whole of the middle ages in this direction. In Germany the preparation was less generally known. In France, where it was still used within the last century, Geoffrey[*] declares that it cannot be procured from all countries equal in excellence. Nich. Culpepper,[†] in England, describes it in a manner similar to Dioscorides. The preparation was used longest in Spain, where it was considered a standard remedy up to the very close of the last century, at least.

In the second edition of the *Pharmacopsca Hispanica* (Madrid, 1798), *Œsypus purificatus* is described on p. 90, as an oily substance, which is obtained through the washing of wool, purified by means of cooking and filtering and used as an external mollifying remedy.[‡] In the first eight decades of our century this remedy possessed only historical interest. This was, no doubt, in consequence of the constantly improved methods of wool-washing, in which by the application of potash, soap or soda, a constantly increasing degree of purity was sought and obtained, at the expense, however, of the fat, which becoming disintegrated was cast away in the water. The more extensive development of technical chemistry, the more thorough manipulation and application of refuse matter has finally also admitted the true value of the water in which the wool is washed. In the year 1880 Dr. F. Elsner[‖] described how the same has been recognized as a very valuable source for the preparation of potash. After the latter has been abstracted the water is finally worked for the production of wool-fat. Elsner, who, as the chemist of the "*Leipziger Wollkammerie*," thoroughly understood his subject, conspicuously adverts to the fact that wool-fat cannot be *thoroughly soaped.*

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[*] Suite de la matière medicale. Paris, 1756. T. 6, p. 121.

[†] *Pharmacopœia Londinensis:* or, the London Dispensatory, London, 1675, p. 264. Cf. T. H. Powell, Pharm. Jour. and trans. Nov. 13, p. 404.

[‡] Cf. Pharmacopoco Batava, Lipsiæ, 1824, I. p. 231. G. A. Richer, *Ausführliche Arzneimittellehre*, Wien, 1832, Bd. 1, p. 227. Geiger *Pharmacopoco Universalis*, Heidelberg, 1835-1845, I., 191, II., 589.

[‖] *Pharmaceutische Zeitung*, 25 year, Berlin, 1880, p. 522. Cf. *Jahresbericht der Pharmacognosie*, etc., Göttingen, 1882, p. 111.

F. Hartman[7] had previously demonstrated the existence of cholesterine, and Ernst Schulze,[8] the presence of isocholesterine compounds in wool-fat. The later also established the fact that these bodies not only existed in a free state, but also in combination with fatty acids of a high molecular weight. The practicability of separating the cholesterine fats from the impurities is an acquired property of late years. The physiological signification of the word was called for, through the important investigations held in the pharmacological institute of the University of Berlin on the various facts of the skins of different animals, and on cholesterine-fat as the normal salve of the skin.

After many efforts it is now possible to procure lanolinum purissimum anhydricum (Liebreich), a preparation that not only surpasses Attic œsypum, the best that Dioscorides ever saw, as the stearine candles of to-day surpass the tallow-dips of our grandfathers; yet at the same time shown by its physiological properties, to be the best known basis for ointments.

During last fall I had an opportunity to test pure lanoline, and ointments made thereof, upon patients. I began my investigation with considerable scepticism. I have frequently been disappointed with the applications of newly recommended remedies; even during the last year I tried a number of fats, among them a sample of centrifugated lanoline with which I was not favorably impressed. Therefore, when first tried, I was actually surprised at the excellent results obtained with a pure preparation. This favorable opinion was only verified by continued investigation. Lanoline, to be sure, is not a panacea, nor will it entirely supplant or make up for all other fatty substances. Yet, in many instances, it will effect a cure more quickly and with greater certainty than the ordinary fats.

In order to commence with the most simple, let me speak of its employment in pruritis and prurigo senilis. I prescribed it for an old lady, aged eighty, who after considerable psychical agitation was afflicted with an attack of pruritis. Formerly, in the case, I had employed some such remedy as natrium bicarbonicum, kalium bitartaricum, kalium bromatum or radix valerianæ, internally, with an additional lotion or an inunction of fat, especially cod-liver oil. Shortly after the first application irritation ceased. The patient slept quietly on the first night. After a few days the condition was so much improved that it was only necessary to repeat the lanoline two or three times in a diminished amount. In this instance I had resource to a cheaper variety of centrifugated lanoline, and the result obtained therewith was also satisfactory.

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[7] Ueber den Fettschweiss der Schafwolle, Inaug-Diss, Göttingen, 1868.

[8] Berichte der Deutschen chemischen Gesellshaft zu Berlin, 1873, s. 251. Vgl. auch Hoppe-Seyler, Physiologische Chemie, IV. Theil, Berlin, 1881, s. 762.

I admitted into the hospital an old woman, aged eighty-eight years, suffering from prurigo senilis. Papules and pigment spots, due to eruptions, covered her entire skin. She was emaciated from intense itching and want of sleep. Her general condition was very bad. The closest inspection showed no evidence of pediculi. Yearly, among the poorer classes, I have met just such individuals, and it has been my experience that they rapidly improved in a hospital, resulting from better nourishment and greater care. Formerly, I employed inunctions of fat, and in severe cases embrocations of cod-liver oil. This time I immediately ordered lanolinum purissimum mixed with 50% of adeps suillus, with which one-fourth of the body was well annointed every night. Within a few days the patient began to grow better. Sleep and appetite returned. During a week she had improved so much that a warm bath was prescribed. At the end of four weeks her condition seemed normal again. The applications were now discontinued. A slight itching which now and then arose about the neck and on the arms subsided at once, on the renewal of the application.

I have treated simple fissures and excoriations partly by rubbing the lanoline into the tissue itself, and partly by spreading it on pledgets of perfectly clean cotton and applying the same to the surface. It is protective, modifies pain, and favors the formation of new epidermis, by rendering the adjoining skin softer and the tension less. Naturally in deeper injuries an antiseptic treatment would be indicated. I have not used it for this purpose, yet it seems feasible that in the preparation of antiseptic gauzes it might be advantageously substituted for glycerine, castor oil and rosin.

The ordinary zinc ointment can be fully replaced by one compounded from lanolinum anhydricum and ten per cent. zinc oxide. Besides having all the virtues of the old it possesses the additional advantages of better adhering to moist surfaces, and of being more easily rubbed into the tissues. Lanolimentum zinci oxidi is fast becoming a favorite instead of ceratum labiale. It makes the lips soft, and has an indifferent taste.

Still better results were obtained with a lanoline boracic acid ointment of a ten to twenty per cent. strength. Two cases of herpes circinatus were treated. One occurred on the wrists and dorsal surfaces of the hands of an aged cigar dealer, which had existed in the form of a well developed exanthem for some weeks. The other in a woman, who, shortly after putting on a red flannel wrapper, discovered a large number of itchy yet dry circular efflorescences upon her shoulders and upper portion of her back. Within the space of one week both cases were apparently cured. The twenty per cent. ointment also acted well in eczema that had a tendency to return.

A married woman first presented herself for treatment in the fall of 1885. She had then been suffering for six weeks from a very acute eczema, which spread over the entire face, ears, scalp and neck. Both hands were also involved. The diseased portions were mostly covered with crusts of pus. The eyelids and ears were greatly swollen, the itching unbearable. Beneath the crusts was found a moderate infiltration, and occasionally a red and weeping surface. At the border the exanthem was still in a stage of advancement, being surrounded by a line of small vesicles. On both ears it extended into the external meatus, covered with bloody fissures and flakes of denuded skin. The irritation here was intolerable. This woman, who was formerly the picture of health, had now become greatly emaciated, and in a frightful state of nervous irritability and weakness, due to constant sleeplessness and the incessant itching.

She had been treated from its commencement, but in vain. Finally, on using compresses wrung out of lead water, she began to improve, and after some weeks apparently recovered. She remained well until the following fall, when I again was called. She had been in bed for three weeks with the difficulty fully developed, and occupying the same localities, with the formation of crusts in the center, a general weeping of the surface, and the borders surrounded by a three-fourths cm. zone of clear transparent pearl-like vesicles. The eyelids were œdematous, especially the right, so much that they could not be opened, the itching incessant. From her former experience she had applied lead lotions from the onset, but without avail. I immediately discontinued the lotion and personally applied the following ointment:

℞	Acidi borici pulverati	20.00
	Lanolini puriss. anhydr. (Liebreich)	80.00

M. d. s.

The ointment was applied rather thickly, and easily rubbed into the moist localities. A sensation of burning was at once manifest, which was agreeable compared to the previous itching. Within fifteen minutes after I left the patient irritation had about ceased. On the sixth day I received a note from her thanking me for that wonderful ointment, which, in fact, had worked like magic. The itching immediately grew less, the swelling gradually subsided, which up to the vesicles had entirely disappeared. Eight days later I again saw her. No new eruption had shown itself. The skin was everywhere smooth and tender. There was present only a slight sensibility towards water or a draft of air, which grew less from time to time.

The following pomade has done me good service in bed-ridden females (tuberculosis, parametritis) where the daily dressing of the long hair is necessary to prevent matting:

℞	Lanolini puriss. anhydr. (Liebreich)	15.00
	Cetacei	
	Olei amygdalarum, āa	5.00
	Olei bergamiæ, gtt	v
	Olei lavandulæ, gtt	xv

M. f. l. a ungt. d. s.

All the tar remedies can be advantageously applied with lanoline. A cadet at sea had contracted a dry scaly eczema of the hands and face, during an eight or nine months' voyage. The nose was quite scarlet. The following ointment was ordered:

℞	Ung. basilici nigri	5.00
	Lanolini puriss. anhydr	45.00

M. d. s.

After fourteen days the trouble disappeared and has not shown itself since.

The results obtained with an ointment containing ergot, which I frequently employed for hæmmorrhoids, were excellent when compounded with lanoline.

Again, in a number of cases I employed lanolimentum hydrargyri cinereum, containing ten per cent. of lard; and in a number of others the same, with an addition of lanolinum puriss. anhydr. This diluted ointment proved efficacious in pediculosis. Only a few applications were required to remove numberless adhering pediculi pubis, and the inaction which so often occurs with the ordinary blue ointment never became manifest. This ointment also caused the absorption of a chronic infiltration resulting from an ulcer near the axilla.

The stronger preparation I used in leucorrhœa, with a very irritating discharge, with good success.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, August 2, 1887.

Reported by Chas. G. Steele, M. D., Secretary.

Dr. J. B. Coakley, presided. Drs. George H. Westinghouse, H. H. Bingham, Edward L. Gager and John T. Pitkin, were elected members. Dr. Julius Pohlman was proposed for membership.

There was no paper presented, Dr. W. W. Potter, who was to have read, being absent.

Under the head of voluntary communications Dr. S. W. Wetmore reported a case of vaginal hernia, which had been thought to be a cervical polypus. It was as large as a thumb, and was attached about two inches above the vulva. The ring could be plainly felt. The hernia had existed before the woman's confinement twenty months ago, but was not noticed at the labor. Dr. Wetmore had never seen a hernia so low down in the vagina. He asked for opinions as to the best method of treatment. Dr.

M. D. Mann said that the literature on this subject is extremely meagre. There are three varieties of vaginal hernia: the first occurs behind the uterus; the second anteriorly between the uterus and bladder, and the third is into the labium majus. They are all rare. Dr. A. M. Barker reported a case a couple of years ago, which was similar to Dr. Wetmore's. The posterior hernia is the only one in which there is a distinct ring. The treatment is unsatisfactory, but a carefully fitted pessary seems to do the most good. In the pudendal form a radical operation is best. Several of those in the vagina have been operated on for supposed polypi. One weighing ten pounds was once removed, and the greater part of the intestines came with it.

Dr. Edward Clark reported a case of papiloma of the rectum.

Dr. P. W. Van Peyma said that a grandfather had told him that his three grandchildren had all been born breech foremost, and each child had a different mother.

The usual summer disorders were reported as prevailing. The association adjourned.

Selections.

TREATMENT OF JAUNDICE.—Gluzinski has obtained excellent results from Krull's method, viz.: the repeated injection of large quantities of cold water into the rectum. This increases the peristaltic action of the intestines, and removes any mechanical obstacle to the flow of bile. Besides, the bile is thus rendered both more liquid and more abundant, so that it more easily overcomes any obstruction. At first water at 59° F. is injected into the bowel until the patient complains of a feeling of distention in the abdomen. He is then made to retain it a quarter or half an hour. The next day the enema is repeated, but with water about 4° higher. The temperature is again raised on each succeeding day, but when 72° have been reached no further increase is made. Altogether four or five enemata are sufficient to produce the desired effect. The increase of the biliary secretion may be judged of by the color of the fæces. Of course, the diet is attended to in order to prevent a recurrence of the affection.—*The Lancet, April 23, 1887.*

THE VALUE OF SALOL.—Bielschowski, Rosenberg, Feilchenfeld publish their experience with this new anti-rheumatic agent. 1. Bielschowski gave the drug in twenty-seven cases of acute articular rheumatism. Nineteen patients recovered rapidly, two only after the exhibition of salicylic acid, six remained chronically affected, in eight relapses occurred. The daily dose was 75 grains. The drug was readily taken, and caused no after-effects. 2. Rosenberg gave salol in daily doses of 2 drachms, and confirmed—save in one case, where salicylic acid helped at once—its anti-rheumatic virtues, though he observed in nearly all cases untoward secondary effects,—perspiration, nausea and vomiting. Its only advantage over salicylic acid consists in causing less gastric irritation than the former, as its solution and resorption does not take place in the stomach, but in the duodenum. He reports good results with salol in small doses (30 to 45 grains daily) in cystitis and pyelitis. In ulceration and chancrous processes of the legs the drug is likewise useful.—*Therap. Monatshefte, I. 2, 1887.*

WETTING THE BED.—Dr. Alexander Harkens, of Belfast, Ireland, in the *Medical Register*, discusses the subject of nocturnal enuresis in children. He believes it to be a reflex act from a chronic congestion of the medulla oblongata when not due to calculus, contraction of the meatus urinarius, phymosis, adherent prepuce or other surgical impediments, or to impetigo or to ascarides, which require special treatment. When none of these causes can be discovered and removed, temporary relief may be obtained by belladonna and bromide of potassium, which diminish reflex action and cause anæmia of nerve centers; but for complete cure these are insufficient, and recourse must be had to derivatives and revulsives, such as dry or wet cupping or blisters applied to the nape of the neck and as close as circumstances will allow to the neighborhood of the foramen magnum and the medulla oblongata. It is seldom necessary to resort to cupping, one full vesication being sufficient to effect a cure—a second application being rarely required, though in very obstinate cases wet cupping will have to be performed.

"DOCTOR," said the friend, stopping him on the street, "what do you take for a heavy cold?" "A fee," replied the doctor softly, and so passed on.—*Burdette.*

Sulphur in Chlorosis. (*L' Union Medicœle*).—When chlorosis will not yield to iron or other remedies sulphur should be resorted to. Prof. Hugo Schultz, of Universify of Griefswald, is an advocate of this treatment. He gives the sulphur in powder, with twice its weight in sugar—*as much as will lie on the point of a knife*—three times daily. He concludes in an article in the *Deut. Med. Wockenschrift:* (1) In true idiopathic chlorosis, where iron is ineffectual, sulphur will produce a marked amelioration. (2) After using sulphur, iron can again be resorted to, and it becomes very beneficial. (3) In cases of chlorosis complicated with gastric catarrh, sulphur is usually ill borne.

A Cure for Freckles.—Halkin's procedure is as follows: The skin being washed and dried, is put on the stretch with two fingers of the left hand, and a drop of carbolic acid is applied exactly over the patch. When it dries the operation is completed. The skin becomes white, and the slight sensation of burning disappears in a few minutes. The thin crust which forms after the cauterization should not be disturbed; it detaches itself spontaneously in eight or ten days, leaving a rosy coloration, which is soon replaced by the normal color of the skin.—*American Practitioner and News.*

Removal of Freckles.—The following formula is said to be efficacious for the removal of tan and freckles:

℞	Hyd. bichlor	gr. vj.
	Acid. mur. dil	ʒ j.
	Aquæ	℥ iv.
	Alcohol	℥ ij.
	Aq. rosæ	℥ ij.
	Glycerinæ	℥ j.

M.—Apply at night, and wash off with soap in the morning.

—*Canada Lancet.*

E Sedecim Unum.—A man with a purple nose was fishing for porgies off South-street wharf last Saturday and suddenly fell into the water. A fellow-fisherman of benevolent aspect promptly hauled him out, laid him on his back, and then began to scratch his head in a puzzled way. "What's the matter?" asked the excited bystander. "Why don't you revive him?" "There are 16 rules to revive drowned persons," said the benevolent man, "and I know 'em all, but I can't just call to mind which comes first." At this point the drowned man opened his eyes and said faintly: "Is there anything about giving brandy in the rules?" "Yes." "Then never mind the other 15."—*Philadelphia Call.*

HUMORS OF GENERAL PRACTICE.—(A dialogue which really occurred). Doctor—Good morning, Miss Jones. Did you take the cathartic pills which I prescribed last night? Miss J.—Yes, sir. Doctor—Did they operate? Miss J.—O, yes, sir. I had seven *passengers* from my bowels this morning.

Book Reviews.

MANN'S SYSTEM OF GYNECOLOGY BY AMERICAN AUTHORS. Edited by M. D. Mann, A. M., M. D., Professor of Obstetrics and Gynecology in the Medical Department, University of Buffalo. Vol. I., pp. 775. Profusely illustrated. Philadelphia: Lea Bro's & Co. 1887.

Suitable representation of our prëeminently national work can only be furnished by American authors; to home writers alone must we look for exposition of home work. And in this collection of monographs by the most distinguished teachers and writers of this country one may find that which has put our gynecological therapeutics so far ahead and which has caused our gynecologists to be looked up to and quoted all over the world. The volume opens with a Historical Sketch of American Gynecology, by Dr. E. W. Jenks, in which he has done as full justice to his subject as his space would allow. Dr. H. J. Garrigues takes up The Development and the Malformations of the Female Genitals. The Anatomy of the Pelvic Organs is assigned to Dr. Coe; the matter of Gynecological Diagnosis to Dr. Grandin; the General Consideration of Gynecological Surgery to Dr. E. C. Dudley, and General Therapeutics to Dr. Skene. Electricity in Gynecology is taken care of by Dr. Rockwell. Dr. Wylie deals with Menstruation and its Disorders, and Dr. A. R. Jackson with Sterility. The essay on Diseases of the Vulva is by the editor, Dr. Mann. Dr. C. D. Palmer treats of The Inflammatory Affections of the Uterus, and Dr. Reamy of Subinvolution of the Vagina and Uterus. Dr. Maury writes on Periuterine Inflammation, and Dr. Van de Warker on Pelvic Hæmatocele and Hæmatoma. Among so many excellent papers it is perhaps invidious to select a few for special comment. Yet the papers by Dr. Garrigues strike us as peculiarly happy because of the clearness with which they deal of important but obscure elementary subjects. So also with Dr. Coe's article on Pelvic Anatomy; readable, elaborate, yet concise. In the article by Dr. Wylie on Menstruation he addresses himself rather to its disturbances than to its normal physiology.

Dr. Mann's monograph on Diseases of the Vulva is admirably complete; and that part devoted to herniæ, including all the unusual varieties such as pudendal, vaginal, etc., is more full than can be found in any other paper in our tongue. The concluding articles by Drs. Reamy, Maury and Van de Warker are all scholarly and fresh. Altogether we hardly know which have been the most fortunate, the publishers in their choice of an editor or the editor in the choice of his contributors. Certainly the editor has done his work well, and we congratulate him the more because as a fellow-townsman he has reflected credit on our city. The work is beautifully published, the type and paper are good, and the illustrations admirably adapted and lavishly supplied. The second volume will follow in a few months.

THE TREATMENT OF HÆMORRHOIDS. By Chas. B. Kelsey, M. D. No. 1 of The Physicians' Leisure Library. Detroit: Geo. S. Davis.

The author has succeeded in presenting within a compass of 78 pages an exceedingly entertaining essay on a very important subject. Without going deeply into their pathology, he has shown first how to discover them, then how to classify them, and lastly how to successfully treat them. His descriptions of the different varieties are so plain that no mistake can well be made. His hints as to the best way in which to make a satisfactory rectal examination are well worth committing to memory. In the matter of treatment he does full justice to the ligature, the injection and the clamp and cautery. He fails, however, to make any allusion to the method by exsection, which Whitehead has so recently and so ably advocated. This is the only omission which in any degree mars the completeness of his very readable monograph. It is issued as number one of Mr. Davis' Physicians' Leisure Library, is printed in tinted ink, and is sold at the low price of twenty-five cents.

SEXUAL IMPOTENCE IN THE MALE AND FEMALE. By Wm. A. Hammond, M. D. Pp. 305. Detroit: Geo. S. Davis. 1887.

A volume on male impotence by this author has previously appeared, and it was kindly received by the profession. The demand for the book, and the frequent appeals to the author to complete the work by considering also female impotence, has led to the publication of this second and more complete edition, which will doubtless be regarded with interest and even referred to occasionally as one comes into contact with victims either of their own lust or imagination. All practitioners of experience will concede the malign effect of departures from normal sexual health on the general mental and bodily condition of the individual. To clearly point out, therefore, the varieties and manifestations of impotence, and the proper treatment for the restoration of such patients to a normal condition or virile power, is a task which will be gratefully appreciated by the general practitioner, and one which Dr. Hammond has ably performed in this treatise with scientific thoroughness, and with his own inimitable grace of diction, albeit with something of a pruriency and almost relish which will please some as much as it will cause a proper few to wish that the learned author had shown himself less fond of details. As a record of startling cases the book will certainly pass; nevertheless one can hardly see why it takes so large a shell to hold so little meat, since there is exhibited a fondness for detail which is unnecessary. However, we need more or less of just such information and the publisher has done well in reproducing the book in neat form.

SYPHILIS. By Jonathan Hutchinson, F. R. S., LL. D. Being one of a series of Clinical Manual. Pp. 532. Philadelphia: Lea Brothers & Co. 1887.

There is no more marked figure in the English profession to-day than that of the illustrious surgeon to the London Hospital, by whose indefatigable energy the literary world is being continually enriched. An expert in pathology, in surgery, in ophthalmology and in dermatology, he speakes and writes as perhaps no other living Englishman can. This little manual on syphilis presents his views on a subject which he never touches save to adorn. He lays down in his preface a thesis which even though coming from a remarkable man is remarkably strong, and must provide much opportunity for thought: "The creed which will be found to interfuse not only this work, but almost all that I have ever written on syphilis, is that the disease depends on a living and specific microbe, and that it is contagious or transmittable only so long as that microbe retains its vitality. It is, I believe, of the utmost importance to keep this doctrine clearly in mind, for it simplifies our reasoning, and clears our view at every step. Considering the successes which bacteriology has attained of late years, it is certainly surprising that no one has as yet been able to demonstrate the special microbe of syphilis. That this discovery is in reserve for some future investigator I have the utmost confidence in believing."

His descriptions of syphilis are vivid and accurate, and his histories of cases are models which may well be imitated. The chromo-lithographs for the most part serve their purpose well. A peculiarly valuable feature of the book are the commentaries or clinical illustrations which are introduced in large numbers, while their frequency and aptness show not only what an immense experience the author has enjoyed, but what a careful note-taker and student he is. We esteem this little manual to be one of very great value.

A PRACTICAL TREATISE ON THE DISEASES OF THE HAIR AND SCALP. By George Thomas Jackson, M. D., Instructor in Dermatology in New York Polyclinic; Assistant Visiting Physician to New York Skin and Cancer Hospital. Pp. 356. New York: E. B. Treat, 771 Broadway. 1887. Price $2.75.

This treatise has for its object the presentation of a concise and systematic account of the diseases of the hair and scalp, with special reference to their diagnosis and treatment. It is based upon the latest ascertained facts, and supported by the best authorities, being a most careful compilation of recent knowledge rather than the result of personal investigation.

The first chapter upon the anatomy of the hair is taken chiefly from Prof. Waldeyer's classical work, "Atlas der Menschlichen und Thierischen Haare," and may be regarded as standard and trustworthy, while the pages devoted to their hygiene are extremely interesting and suggestive.

All matters, too, in the following chapters are briefly but justly considered, and the author's conclusions appear to be sound. In the absence of any thorough and exhaustive work on the subject it justly fills a gap in the English literature, which cannot be too highly commended. It will be found helpful both to the general practitioner and the specialist.

The book is a handsome one as to type, paper and binding, while a number of illustrations add to its attractiveness and clearness.

THE MODERN TREATMENT OF DISEASES OF THE HEART. By Prof. Dujardin-Beaumetz. Translated by Dr. E. P. Hurd. Vol. I. Physicians' Leisure Library, No. 2, 1887. Geo. S. Davis. Detroit.

Being a version in English of part of the first volume of the *Leçons de Clinique Therapeutique* by that inimitable clinical teacher and profound and versatile scholar, Dujardin-Beaumetz. The volume before us concerns itself entirely with the treatment of valvular lesions which result from endocarditis, and in fact only with aortic and mitral lesions; nevertheless, as the author says, it is not the lesions themselves which are amenable to therapeutics, but only their consequences. Accurate diagnosis once made rational treatment is much simpler, but this book takes it for granted that the former is already formed. With the information which this book furnishes it is possible to do a great deal to alleviate those symptoms of valvular disease, many of which are so distressing to the patient.

It is refreshing to see on every page the evidences of the writer's vast command of all the modern resources for both physiological and clinical researches and of the excellent use which he has made of them. The latest dicta of this great authority may be now most easily obtained, and there is absolutely no excuse for ignorance when the information can be so easily and cheaply procured.

BOOKS RECEIVED.

From E. B. Treat, New York:
Diseases of the Hair and Scalp: G. T. JACKSON.

From Geo. S. Davis, Detroit:
Diseases of the Heart. Vol. I.: DUJARDIN-BEAUMETZ.
Sexual Impotence: WM. A. HAMMOND.

Transactions of the New York State Pharmaceutical Association. Vol. IX.

From Lea Bro.'s & Co., Philadelphia:
Diseases of the Eye: EDWARD NETTLESHIP.

From G. P. Putnam's Sons, New York, through Peter Paul & Bro.,
The Curability of Insanity: J. S. BUTLER.

From Blackiston, Son & Co., Philadelphia:
Antiseptic Midwifery: PAUL BAR.

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THE RELATIONS OF MIND AND BODY.*

By H R. Hopkins, M. D.,
Clinical Professor of Nervous Diseases, Medical Department, University of Buffalo.

Beyond all doubting the study of anatomy and physiology in the steady penetrating light of modern chemistry has had a powerful influence upon the belief concerning the nature of the mental process, and the relation which that process bears to its instrument the human body. In certain respects the influence of this drift in belief is to be considered favorable, and certainly has been productive of great good. The fierce zeal of the atheistic or materialistic anatomist, has driven him, in his search for the seat of the mind, to such a minute duty of the regions of the brain, that our knowledge of its anatomical and physiological elements is much the richer, and as the result of such study the new science of psychology is slowly but surely making ground.

In clinical medicine and in surgery the results of this same research are shown in the confidence with which diagnoses of the locality and the nature of brain lesions are made, and have lead the way to some of the most brilliant of the achievements of modern surgery. We are never so proud of our profession as when making the claim that she is truly scientific in character, and that real advance only takes place upon the facts revealed by the investigations of the anatomist, the physiologist and the clinician.

The observer who now sweeps the medical horizon cannot fail to discover the greatest activity in the departments of psychology and neurology, and he must be dull, indeed, who does not discover that the entire camp is quickening under the reflected influence of this new life. When you ask me, Why this improvement? Why this advance? the reply must be, it is in the largest sense due to the discoveries made in the anatomy and physiology of the nervous system.

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*Being the Introductory Address delivered at the opening of the Forty-second Annual Session.

Every member of our profession has a place in this joyful procession, and I would that there was nothing required of the occasion but words of rejoicing and congratulation. The thoughts, however, which I wish to bring particularly to your minds this evening arise from the consideration of another side of the picture, or I may say another picture, a view of the medical horizon where we see activity and advancement replaced by inertia and retrogression, and in place of the bright gleams of courage and hope, the lurid mists of unbelief and despair.

From all time man has asked: What am I? Why am I? What shall my end be? and as from all time, even so during all time, man's happiness and usefulness largely depends upon the answers he finds for these momentous self-questionings.

Belief answers: I am a living spirit, made in the image of God, by whom all worlds were made; and under the shaping of belief human character has reached its highest development and efficiency. Modern materialism, falsely called modern science, answers: I am matter and motion; a fortuitous combination of large sized chemical molecules of great potentiality and instability, evolved through countless ages from the slime of some Silurian sea. I am here to eat and drink, for to-morrow my molecules may lose their combination, and I shall cease to be. Behind, close following, there stalk the spectres communism, nihilism and despair. Tacitly or avowedly too many members of our profession are the champions or the victims of this unbelief, and in too many instances such members are men renowned, and justly so, for their anatomical or physiological studies.

It would seem that the inauguration of the department of the Diseases of the Nervous System in this University is an appropriate occasion for the consideration of the question as to what views we may entertain concerning the nature of mind, and concerning the right relations of mind and body. Should there be a thought in any mind, as to the inappropriateness of this discussion by myself at this time, it is only necessary to remark, that the brain is the citadel of man's immaterial part. The outposts, sensitiveness, irritability, motion, growth and other characteristics of living beings have almost ceased to receive the attacks of the materialist. His attack is now concentrated upon the higher qualities conciousness and will, and it surely is in order for one whose chief study is man's nervous system to express his views concerning the highest manifestation of function of that system.

And at this point it may be well to state in greater minuteness the positions of those who believe and of those who attack that belief. The positive position may be briefly stated as follows: Life exhibits the manifestations of a force, vital force unlike any of the physical forces of matter, and underived from them or their resultants. Life is the result of a definite creative act, possible only to Omnipotence. Man, the head of the living kingdom, has three parts, a material physical body, a living vital force, and an immaterial soul. As thus constituted he is a free agent, capable of a knowledge of himself, and of a knowledge of God, capable of self-development and immortality, and capable of self-destruction and annihilation.. Against this belief modern materialism advances the affirmation, in effect a negation of matter and motion, that in the universe there is no God, in nature no mind, in life no vitality, in man neither will nor spiritual persistence; that all so-called vital phenomena, from the protoplasmic crawl of the moner to the highest exhibition of human intelligence, are but a complex showing of the various material forces, potential or actual, of which the individuals are composed.

Time will not permit me to enumerate the steps by which this conclusion is reached, or to mention the names of the chief advocates of this doctrine. These names include many able workers in the various departments of science, and the doctrine has grown from a more minute study of inorganic and organic compounds, from a more general application of the laws of the conservation and correllation of force, and has received a mighty impulse since the promulgation of the popular doctrine of evolution.

To the member of our profession, one who is at once an anatomist, a physiologist, a chemist and a clinician, the doctrine comes with great force. Take, for instance, his observations upon the human brain and its functions. Anatomy teaches him that the brain is a most complex organism or series of organisms, evidently intended for the manifestation of remarkable and unusual powers. Physiology further assures him, that each separate portion of the brain has its distinct function, and chemistry adds the proof that each thought, each emotion, each effort of will, is attended by a definite oxidation of brain substance; while clinical experience abundantly demonstrates that impairment or loss of brain substance causes perversion or loss of that portion of mind related to the given anatomical lesion, and that by such means every mental manifestation may be seen to disappear. In a more general observation of men under all conditions, he is ever impressed with the apparent causal relation of organization to function and of organization to life. That organization is always apparently first, and that function always waits upon it. That to impair the body is to impair the manifestations of its powers, and that to destroy the body is to terminate the life. These observations the physician makes incessantly and continuously, and their effect upon his mind is obvious. In recruiting the ranks of the skeptics and materialists the profession of medicine has furnished her full quota.

In undertaking to present the apparent fallacies of those who deny the immateriality of life and mind, I shall not attempt to traverse the entire argument, but shall content myself with the setting forth of a few of the more salient points; and I will premise the little I shall say with the statement, that the nature of matter, the nature of force, the nature of life, the nature of consciousness, the relations of life and matter, the relations of mind and body, are subjects concerning which we can only speculate.

It should also be remarked that the belief in the immateriality of mind is so universal, and so firmly established, as to make a complete indictment necessary to its overthrow; the burden of proof rests upon its assailants, and its holders have only to ask in any case, Is the indictment complete? To my mind the position of the materialist shows the important weakness of rendering sequence the same as consequence. Without question, organization and function are concomitant, and by the same token the attack upon the nature of mind must fail or show that the line of cause always proceeds from organization to function; that the organization is first in time, first in place, and first in causative effect.

Gentlemen, I congratulate you upon the fact that so eminent an authority as Herbert Spencer, the apostle of evolution, after a full consideration of this matter, gives his judgment directly against the position of the materialist, and says in so many words, that instead of organization being first and being the determining principle of function, that function is first and forms or molds the organization; through or by which its manifestation appears. We, therefore, have Herbert Spencer's authority for the claim that vital force exists; that vital force acts upon and controls matter by molecules and in mass; that vital force is intelligent and adapts means to ends; and we do not need his authority for the claim that such a force is not derived from inorganic matter.

Another fallacy in the crusade of the materialist lies in the application he makes of the doctrine of evolution. This theory of gradual development from lower to higher forms of life would account for all vital phenomena from moner to man, without admitting the operation of any other than the material factors of matter and its forces. The theory has the fatal error of depending upon spontaneous generation for its initial supply of protoplasm, and spontaneous generation has never been observed or accomplished.

Within recent years modern chemistry has made rapid advancement, with which all are most justly proud, but they who wish to believe in the immateriality and persistence of mind, have no cause for alarm. Modern chemistry has not yet produced a living molecule, and we may continue to believe in the super-material origin of life until the chemist produces an egg that will hatch.

The atheistic chemist is filling the air with his reports of analyses of matter that was once associated with life, and therefore called living matter, and he assumes to tell us that his tests, his crucible, his balance, detect and measure everything which living matter contains. Methinks he would smile in derision at the post-mortem examiner who should presume to give an opinion upon the ability of an actor from observations gathered at his autopsy. Modesty of speech regarding the attributes of living matter will become the chemist until he completes its exhaustive analysis while yet alive. Probably no one will deny the importance of molecular arrangement in the constitution of bodies living and dead, and all will admit that, owing to the large size of the molecules found in matter that was once living, complex and complicated molecular combinations and aggregations are thereby favored. He will, furthermore, be bold, indeed, who shall claim that the molecules of a living body make no changes in this arrangement in passing from life unto death.

On the other hand, but small courage is required for the statement that that which differentiates the living from the dead is the delicate inter-adjustment of its molecules. We now come to the pith of this question, what power operating in living matter holds in delicate and exact adjustment its blind and purposeless atoms? Where in the realm of physics will you find the force or forces which stored in the jelly-like mass, the human ovum, controls its future, gives shape and size to the bones and muscles, transmits hereditary tastes, proclivities and adaptations, and, in short, stamps the indelible imprint of individuality upon the physical, mental and moral nature of the man. To me the conclusion comes with overwhelming certitude. Vital force exists not as an abstraction, a dream, a hope, but as a natural fact, as one of the most highest and most palpable manifestations of mind in nature, a fact everywhere intelligent, ever purpossive, in essence as high above matter which it ever controls as is the luminous ether, which permeates all bodies and fills all space above the coal which burns upon the hearth.

I see vital force made sensible or manifested wherever there is living matter, and I see this manifestation through organizations which the same vital force has constructed from structureless non-living matter; more than this, I see vital force not abstract but concrete; vital force with complete form and individuality. I see the perfect type of the individual that is, but is not yet perceptible to material organs, and I see that this pre-material being is composed of non-molecular matter. And inasmuch as this individual living being was in very thought and efficiency formed and completed in its ante-material state, so my mind finds no difficulty in following the same individual after its material invesiture has been laid aside, and I still see perfect, complete and persistent individuality.

Gentlemen, I am quite conscious that this speculation may seem to you too venturesome, but I submit that it is but the natural deduction from the premise of that calm and relentless analyst, Herbert Spencer, that life precedes and causes organization.

You may think that I have wandered far from my subject, and in fact have forgotten to say anything about the relations of the mind and body, but I still trust that I shall be able to convince you that the neglect has been more apparent than real. We were some time since reminded that the brain was the citadel of the mind, man's immaterial portion, and that this chief city, this citadel, was in a state of siege. Encamped about its walls was a hostile army of materialists, communists, nihilists, atheists all, and we saw that the citadel had walls, ramparts, rifle-pits, and other outlying defenses, which we called after the lower manifestations of life, reaching well out towards the enemy's camp, where we stationed on picket duty, the feeble, almost motionless and structureless monad.

From our lookout high up in the citadel we can survey the whole field and receive dispatches from every quarter, and the cry is: How goes the battle? Is the citadel in danger? Have the walls been breached? Is the line of battle broken and in confusion? Are the rifle-pits silent and empty? Has the skirmish line been driven in? Have the pickets all been taken prisoners? And the answer comes. The citadel is not in danger, the walls are firm at every point, the line of battle stands shoulder to shoulder, and is beautiful with music and banners, the rifle-pits blaze with a steady and regular fire, the skirmish line is busy sending back prisoners, and the monad pickets, unconquered, unterrified and unimitated, almost leap for joy in the thick of the fray.

In conclusion, therefore, we will hold that the relations of mind and body in man are like the relations of mind and matter in nature. That it is impossible to study nature and not recognize the presence of intelligence, adaptation, Mind; and that Mind once recognized and confessed, must take precedence of matter in time and causation. That in man mind appears as the highest manifestation of all vital phenomena, and that, using the term as the exponent and sum of all such phenomena, it may be said that the relation of the mind to the body is the relation of cause to effect, of principal to agent, the relation of householder to habitation, and still using mind in its collective sense, we may rest in the assurance that as Mind in nature was before matter, even so mind in man was before body, and that in establishing the priority and superiority of mind over the body, we reach the truth that mind is imperishable.

SYPHILIPHOBIA.

By F. Bradnack, M. D.,
Buffalo, N. Y.

"*Evâsti? credo mutues, doctusque cavebis.*"—Horace, Sat. vij. 68.

Syphiliphobia, though not so directly fatal, is, nevertheless, quite as real a disease as *hydrophobia;* while, in some cases, it destroys life as surely, if not so quickly, as does the latter malady. Inasmuch as we do not often in medical literature meet with records of it, it occurred to the present writer that a brief synopsis of a case from actual practice might be of interest to the profession. Before citing this case, it may, parenthetically, be remarked, that, if to lose pounds of flesh in a few weeks, to suffer from persistent sleeplessness, headache, anorexia, irremediable melancholia, — and to be driven to the boundary-line of insanity (in some cases *over* the line, and into the territory), constitute a grave malady, then with good reason can syphiliphobia lay claim to that title.

In July, 1883, whilst practising in New York city, I was consulted by H. G., æt. 29, unmarried; a gentleman engaged in scientific pursuits. The history was, briefly, as follows: Two weeks previously this patient had, in an evil hour, and under the influence of wine and convivial associates, one night, paid a visit, in company with two "friends," or, (more strictly speaking) two *enemies*, to a fashionable brothel. Having previously been a man of virtuous habits, he was upon the next day, after the evaporation of the wine, seized with profound horror and remorse in reflecting upon what had occurred. He had formerly dabbled just enough in the medical books of a friend, who was a medical student, to become acquainted with several of the horrific possibilities of syphilis; but without knowing anything more definite of the commencement of the disease than that it began with "a pimple on the privates," which would soon after be followed by (I quote his own words) "lumps in the groin, and an eruption on the body." These were his data for figuring on the problem, and upon these he went to work with a vigor that would do honor to Pasteur himself. For instance, being determined not to be taken by surprise by the enemy, he made from twenty to thirty examinations of the genital regions in every twenty-four hours. No Leverrier searching for an expected new planet could have looked sharper; and, like the astronomer, he also made his observations with glasses. Being near-sighted, he habitually wore a pair of spectacles; and, to make assurance doubly sure, he purchased at an optician's shop a powerful lens; and so made each of his examinations through three glasses. We all know it to be proverbial that unflagging industry is sooner or later rewarded. So it was in this case. It was not on the cards that all these labors and optical observations should go for nothing; and, so, sure enough, one fatal morning, the sixteenth day, he discovered (*horribile dictu!*) what he had so long been looking for. Yet it cannot be said that he was as satisfied with the result of his discovery as was Leverrier with *his;* for he no sooner observed a planet—I mean a *papule*, on the glans penis, than he dropt his glasses, and fainted dead away! We know, as medical men, that the constant fear and expectation of the occurrence of a given lesion at a given point is very apt to induce a lesion of *some sort* at the place expected. Perhaps this case is a partial confirmation of this psychological phenomenon. Anyhow, I believe it can be demonstrated that the constant fixation of the mind on a definite anatomical organ or region, will in a short time give rise to some (probably vaso-motor) disturbances of the circulation, and not infrequently to more serious lesions in the observed locality. However, here, in this case, was a most palpable and obvious lesion,—a papule, which could be not only seen, but felt; and which (in Shaksperean phrase) was "as plain as a pikestaff." So all his fears had fructified, and all his "great expectations" were now realized. He was satisfied that he had syphilis, and that it was of the most malignant kind. Furthermore, and so that he might have in his own mind no doubt of the matter, but rest satisfied in an assured certainty that Nemesis *had* caught up with him, he simultaneously discovered two lumps in his left groin, and also found that his whole body was more or less covered with an itching eruption. Here, surely, was proof enough? The most skeptical layman ought surely to be satisfied with such a confirmatory collocation of symptoms?

Now, these being the facts, what did this young man do? *This* is what he did: He laid aside his lens, discontinued his observations, and went immediately to consult (on Broadway, near 31st street) one of those advertising rascally quacks, who (in their own delightfully euphemistic and euphuistic language) make a "specialty of diseases of *men*" (!) This nefandous old cormorant, perceiving the mental perturbation of his unfortunate patient, took his cue accordingly. He confirmed all his fears, and magnified them tenfold. He told the victim that he was suffering from the worst form of "syphilis and pox combined" (?) that even he, with all his vast experience, had ever seen. On being asked what it would cost to cure the case the "doctor" replied that it would cost one hundred and fifty dollars, of which sum he should require one hundred down in cash, then and there.

Now, the patient, knowing nothing about the existence of this class of charlatans, and supposing that a doctor was a doctor (the same as eggs are eggs), told me that he had expected that the charges for so pernicious a disease would necessarily "come rather high," and had, therefore, gone prepared to pay a good fee; but this preposterous honorarium staggered him. At this juncture it popped into his head that he was slightly acquainted with myself; whereupon, making some excuses, he with difficulty escaped from the den of this man-eater, and came to my office. Upon hearing the whole story I made a careful examination of the patient, first as to his general mental and physical condition, and secondly as to his alleged local lesions.

First, as to the psychical sphere: He was, to begin with, in a state of extreme nervous prostration. Neurasthenia is altogether too mild a word to describe his nervous condition. He had already experienced several choreic symptoms, and his nervousness was so great that it affected his articulation. If ever there was a victim of *panphobia* (as well as syphiliphobia) he was that victim;—taking Maudsley's definition of panphobia—a dread of everything actual and possible. Nay, this man even dreaded some things which were *not* possible; and was beginning to wander in his mind, and to suffer from hallucinations. Not only did he seems to be possessed by this demon (*Syphiliphobia*), but to be positively *obsessed* by it, as though it were a palpable evil genius. His remorse was painful to witness, and from some remarks which escaped from him relative to the eternal perdition of his soul, it appeared as if he were on the verge of becoming entirely demented. His mental torments were clearly due to two separate factors; first, remorse for what he denominated his "wickedness"; second, the expectation of shame and misery which, he had concluded, the loathsome disease would bring upon him in the future. Beneath this dual torment this unfortunate young man was reduced to a condition of the most abject wretchedness which it has ever been my lot to behold.

So much for the effects of syphiliphobia on the *psychical* sphere. Let me now record its action in the *somatic* realm. The general physical condition was as follows: He had lost in less than three weeks eleven pounds of flesh. He could not eat; he could not sleep; he could not sit still. His tongue was heavily coated; his eyes sunken; his bowels constipated. His heart's action was functionally perturbed; but he had no organic disease. His urine was turbid, and contained large quantities of the phosphates. He had inherited a tendency to hepatic disturbance; and upon examination I found that a slight jaundice covered the entire surface of the body. On being questioned, he informed me that this icteritious hue had never appeared before, but had come on imperceptibly during the past two weeks. I have no doubt but that it was due to a perversion of innervation originating in the cœliac plexus of the sympathetic, which secondary perversion was itself caused by the primary cerebral (transmitted) perturbation. The patient also complained of headache, sleeplessness, anorexia, groin-pain, and universal malaise.

After this general physical examination, I came to the alleged local lesions, and found as follows: First, his skin-eruption was neither more nor less than the so-called "prickly heat" (*lichen tropicus*) which was due to the hot weather. Of this cheering fact I informed him. Secondly, there *were*, as he had stated, two lumps in the inguinal region, which were enlarged lymphatic glands. On the left side of the glans penis there was a red excoriated surface, or sore, about the size of a silver dime. This (he said) began as a "pimple," and gradually becoming larger and sorer, had now got to be an open discharging surface. By careful inspection I satisfied myself that, due to the lack of basal induration, and to its general appearance, it was *not* a true Hunterian chancre. The next question, therefore, which presented was—what *is* it?

Reasoning by the doctrine of probabilities, we know it to be a fact that on one isolated venereal venture, a man is at least a dozen times more apt to contract chancroid (or gonorrhœa) than syphilis. Though, of course, he *might* get syphilis on his first expedition, nevertheless, the chances were that if this was a venereal sore at all, it was *chancroid.* But, on examination, it was found to lack the clean-cut, punched-out edges of chancroid; also, some other characteristic appearances, and so I at once threw out chancroid. Neither was it an ordinary ulcer.

The reader will now naturally ask: "Then what *was* it?"—which, being, (as Falstaff would say) "a question to be asked," is, therefore, one which should, and shall be answered. Having become specially interested in this case, and my sympathies being aroused by observing the suffering and misery of the unfortunate patient, I scrutinized every point and symptom closely. While so doing, a curious suspicion suggested itself. I noticed that the patient had on a pair of new trousers, of a somewhat coarse, though fashionable cloth. Asking him when he had first worn these trousers, he replied, "about a week ago." On causing him to stand up, with his suspenders fastened in their usual position, I noticed that a sharpish seam in the cloth came in exact apposition with the sore. All at once it flashed upon my mind that the whole thing was due to the simple chafing of the trousers' seam, *plus* the mental perturbation. I felt sure of it, convinced of it, and (whether we can give a reason for it or not) a *conviction* is far stronger than a mere opinion. So, being thus convinced, I told him that he had not contracted syphilis at all, and assured him that all his worry had been groundless. Fearing that in his *then* state of mind it would be difficult to persuade him that the trousers' seam was his initial venereal lesion (!) I said nothing about it, but directed him to change all his clothes, and to abandon at the same time all his fears and worry. I then prescribed a saline laxative, in conjunction with a nervine tonic and a local dressing for the sore.

It is scarcely necessary to point out that the inguinal glandular swellings in this case were merely due to reflex irritation from the sore,—just as we often see similar swellings accompanying gonorrhœa.

I shall never, it seems to me, forget this patient's extravagant expressions and demonstrations of gratitude when he became convinced of his deliverance from his dreaded enemy. He asseverated that I had saved him from perdition, and pulled him out of the bottomless pit.

I think it is at such times, when thus enabled so to comfort a poor suffering fellow-creature, that a man feels the true blessedness of the physician's calling. He also feels that one such grateful patient (who at the same time pays his bill!) offsets a good many of the opposite class, who neither thank nor pay.

To make a long story short, inside one month, this victim of syphiliphobia had entirely recovered both his health and his spirits. His "chancre" and buboes had all disappeared; also his yellow hue and his skin eruption. In a word, he was a well man. After his entire recovery, I one day informed him of the true cause of his venereal lesions, whereat he was greatly astonished.

As this patient has since died (after a lapse of two years from his supposititious syphilitic inoculation) of pulmonary hœmorrhage, I think I may safely congratulate myself in not having in this case committed an error in diagnosis.

PARALDEHYD.

BY CHARLES G. STEELE, M. D.,
Buffalo, N. Y.

[Read before the Buffalo Medical and Surgical Association.]

Paraldehyd has the chemical formula C_6, H_{12}, O_3, and it is a polymeric modification of aldehyd. It is a colorless, oily liquid, and is soluble in eight parts of water. It has a smell somewhat resembling that of nitrous ether. The taste is pungent and disagreeable. The chemical compound was discovered by Weidenbusch in 1848, but it was not made the subject of physiological and therapeutical research until 1882, when Dr. Cervello, of Palermo, Italy, began a series of experiments with it. Since then several German, French and English therapeutists have used it, and its physiological action has been fairly determined to be as follows:

Brain.—Animals to whom it has been administered give evidence that its principal action is on this organ, and especially marked are its effects on the gray substance. Small doses, according to M. Desnos, provoke symptoms of intoxication, preceded by a short period of excitement, which is not so great as with other soporifics. If a larger dose is given complete anæsthesia is produced, and reflex action is very much diminished. Difficult locomotion is said to have followed its administration in some cases, which would show that it also affects the cerebellum. In still larger doses coma soon appears, and is followed by death.

Spinal Cord.—It markedly reduces the excitability of the spinal cord.

Lungs.—These organs excrete it principally, and it can be detected in the breath for from ten to twenty-four hours after administration. It has no specific action on the lungs themselves.

Heart.—Dr. Leech, of England, noticed that a slight increase in the rapidity of the heart's action was present in almost every case soon after the exhibition of paraldehyd. A subsequent decrease in the frequency and force of the beat follows in from one to two hours after the drug has been given. On the heart itself, however, it has but little or no influence, its action being produced through nervous influences.

Kidneys.—Some observers claim that the flow of urine is increased; others say there is no effect on these organs.

Stomach.—A decided feeling of warmth follows the administration of a dose. It is readily absorbed by the gastric mucous membrane. If the stomach is at all disordered, nausea and vomiting may follow its taking. In this case it can be administered per rectum. The appetite is not affected, even when it is given for a considerable period.

As paraldehyd is a pure hypnotic, and is so closely allied to chloral, a brief consideration of its merits as compared with those of the drug named may not be out of place here. Sleep follows the exhibition of paraldehyd in from ten minutes to a half hour. As with chloral, the slumber is natural and light. There is, however, no period of excitement or delirium, which often results from chloral. The sleep of paraldehyd is rarely followed by headache, but there may be a slight sense of fullness in the head. The breathing in paraldehyd sleep is somewhat slower and deeper than when the patient is awake. When sleep is not produced, the patient, if excited or depressed, is soothed and calmed. This differs greatly from those cases where chloral has been given and has been followed by delirium, insomnia and headache. The sleep produced by paraldehyd lasts from two to twelve hours, thus requiring to be given more often than chloral. It has no power to relieve pain, and is, therefore, of no use in the insomnia of pain. It has none of the dangers of chloral, but has most of its virtues. Instead of weakening and depressing the heart's action, as does chloral, it strengthens and slows it. There are many cases of delirium and insomnia where chloral is indicated, but the physician has not the courage or right to administer it, owing to the weakened condition of the circulation. Here paraldehyd comes in to play with great advantage. No one has ever contracted a paraldehyd habit, and it has been continued for months in cases of insomnia.

Toxicology.—Toxic doses of paraldehyd paralyze the medulla and respiratory center, the heart continuing to beat after respiration has ceased. As there have not yet been cases of poisoning in the human being by this drug, no line of treatment has been outlined.

Administration.—The dose of paraldehyd is ordinarily from m.xxx to ʒii, and but little effect will be obtained from doses under m.xxx. Often if m.xlv are given, and the same dose repeated in an hour, an excellent effect is obtained. Sommer advises that it be not given with alcohol, as in one case he noticed a deep scarlet injection occurring all over the body when it had been given after the patient had taken some alcohol. In the cases of acute alcoholism noted hereafter, no such rash was seen. Yvon's elixir is as follows:

℞ Paraldehyd	ʒiiss.
Alcoholis ad 90°	ʒxii.
Tinct. vannillæ	ʒss.
Aquæ	ʒviiss.
Syrupi	ʒxv.

M. Sig: ℥i. at a dose.

Dr. Eccles of Brooklyn, recommends the following:

℞ Paraldehyd, ol. amygd.......................... āā. ʒi.
Chloroformi.. m v.
Ol. cinnamoni...................................... m i.
M. Sig: This at a dose.

He claims it agrees well with the stomach, and will often settle one that is disordered. It can also be given in capsules; better after eating, owing to the burning sensation it produces in the stomach.

Therapeutics.—Paraldehyd has been recommended to be given in the following diseases: Fevers, rheumatism, acute mania, hysteria, insomnia when not accompanied by pain, hemicrania, melancholia, dementia, the various stages of general paralysis, in which chloral is so dangerous, owing to its depressant action on the heart, in the restlessness and sleeplessness of idiots and imbeciles, and gout. In fevers, where the heart is weak, it may be substituted for opium or chloral. No reference to its use in rheumatism can be found, but it is probably recommended from its action on the circulation and brain. It can readily take the place of opium and chloral in hysterical insomnia, where there is danger of a habit for those drugs being formed. Mr. Hodgson, of Brighton, England, recommends it in gout, acute and chronic. He claims that sleep follows its administration, and that the solid constituents of the urine are increased. Dr. Leech suggests giving it in those grave disturbances of the respiratory functions, resulting from bronchitis or other causes, which are accompanied by great restlessness and insomnia, and where sedatives of all kinds are usually avoided.

Dr. Bokai, arguing from its power of reducing the activity of the spinal cord, experimented on animals with a view to antagonizing the effects of strychnia. Non-fatal doses of paraldehyd were administered, followed by a lethal dose of strychnia. There were no deaths. The antagonism is, however, only one-sided, as, when fatal doses of paraldehyd were exhibited, very large doses of strychnia served to no purpose. Paraldehyd is much more rapidly diffiusible than strychnia, and it seems probable that it may become a better antidote to that poison than chloral or chloroform, which at present are the only satisfactory agents at our command.

While house physician at Rochester City Hospital I became interested in paraldehyd, and detail, briefly, the following cases in which it was used:

B—— came into the hospital very badly intoxicated. He had been drinking heavily for a week. He had eaten nothing in that time, and for three nights had not slept, save when stupified by liquor. After being placed in a private room he became quite noisy and demanded whiskey. I gave him about two drams of Parke, Davis & Co.'s paraldehyd, and insisted upon his taking some medicine. Gave him ʒi of paraldehyd in water. This was a quarter before ten o'clock at night. At ten o'clock he was sleeping soundly. His respirations became slowed, and in an hour his pulse, which had been rapid and tense, became slower and less full. His slumber was as peaceful as a child's, and he did not awaken until four o'clock in the morning, when another dram was given, and he slept until seven o'clock. He was much refreshed, and went through the day with only about an ounce of whiskey, and was not at all nervous. One dram gave him a good night's sleep that night, and likewise on the following night.

L—— was brought to the hospital on the verge of delirium tremens. I ordered ninety minims of paraldehyd, which had not the slightest effect on him. In an hour I repeated the dose, and he became somewhat quieted. In another hour I gave a dram more, and had the satisfaction of seeing him sink into a profound slumber, from which he did not awaken for five hours. It had been impossible for him to sleep for five minutes at a time before he entered the hospital. His food was pushed, and he was kept well under the influence of the paraldehyd, and in twenty-four hours he was out of the danger of an attack of the terrors.

H—— had been drinking steadily for months, and his nervous system was in a badly shattered condition when he came to the hospital. He was disgusted with liquor, and I gave him a bitter tonic, and ordered paraldehyd in ʒi doses at night. After the first dose he became quiet and felt like lying down in the bed. He had been sitting up all day, staring around the room. A second dose sent him to the land of Nod, and when he awoke, which was in four hours, he said he felt like a new man. The paraldehyd was continued for about a week, when he was in condition not to require it.

S—— had merely been on a spree, and wanted to get sobered up. He was an "ugly drunk," and demanded liquor constantly. He aroused my ire a little, and I gave him six drams of paraldehyd in two hours. The drug was too much for him, and he had a sound sleep and awakened in much better humor. He was given doses of ʒi–ii every night for several nights and slept well.

Miss R—— had suffered from nervous prostration for some time. Her heart was irregular and weak. She suffered much from insomnia, and occasionally had peculiar attacks of pain "all over," as she said, when she could not sleep. Hyoscyamus and the bromides had been freely given, opium and chloral being avoided, owing to the liability to the formation of a habit. One night I was called to see her, and at once decided to try paraldehyd, knowing of her heart disorder. After taking two dram doses she went to sleep and slept until morning. She felt much refreshed, but said she could not thank me for having given her "coal oil." As she was a private patient, and had no more attacks while I was in the hospital, I did not use paraldehyd again in her case.

Dr. Angell, of Rochester, treated a case of insomnia in the hospital for several months with paraldehyd, and the results were extremely gratifying.

From the foregoing the following general conclusions have been reached in reference to the use of paraldehyd:

First.—Paraldehyd is a pure hypnotic, and is not an anodyne.

Second.—It is safer than any of the hypnotics, save, perhaps, the bromides.

Third.—It must not be used indiscriminately in place of chloral hydrate. There are only certain cases in which it is indicated, in which chloral is contra-indicated.

Fourth.—It is going to serve a grand purpose in those cases of insomnia and cerebro-spinal disturbances where the circulation is weakened and a nervous sedative is required.

Fifth.—It is an excellent substitute for chloral, the bromides and valerian, in the treatment of delirium tremens and acute alcoholism.

Sixth.—It may prove of great service as an antidote to strychnia.

CLINICAL NOTES FROM THE GENERAL HOSPITAL.

REPORTED BY W. H. BERGTOLD, M. D.,
Late House Physician, Buffalo General Hospital.

CUT-THROAT WITH PECULIAR ATTENDING CIRCUMSTANCES.

An exceptional case of self-inflicted injury lately came into the hospital, which is worthy of note. J. K., a butcher by occupation, recently had a sum of money bequeathed to him. Immediately on gaining possession of it he began a protracted spree, which terminated very tragically August 10.

On the morning of that day, while in a condition of delirium tremens, he attempted suicide by cutting his throat. The instrument, a common case-knife, was very dull, and only cut a gash transversely across the neck, about two and one-half inches long, just above the upper border of the thyroid cartilage. As the parts were very fleshy the incision merely divided the skin and superficial fascia, leaving entirely uninjured the deeper and more important structures. Before further harm could be inflicted the patient was overpowered and brought to the hospital.

Here he seemed perfectly quiet and resigned, and did not offer any resistance while the wound was sutured with cat-gut. A corrosive sublimate dressing was applied, the man put to bed, and an attendant stationed by his side to watch him constantly. During the afternoon he appeared quiet and took medicine and nourishment willingly.

About seven o'clock in the evening, before the nurse could realize what he was about or raise a hand to stop him, the patient inserted his hand between the dressing and his neck, crammed his fingers in the sutured wound and tore it open again, fearfully lacerating the parts. The hemorrhage succeeding was severe, occasioning considerable loss of blood before he could be secured. It was checked with a large, flat, pedicle clamp, thrust into the laceration so as to grasp a mass of tissue containing the bleeding points.

Close examination revealed the superior ring of the trachea fractured at about its middle, the thyroid cartilage completely ruptured from above downwards in the median line, making respiration through this opening possible, the crico-thyroid membrane almost completely obliterated, a few shreds alone remaining attached to its cartilaginous supports, and, lastly, the external jugular vein completely torn across, giving rise to the hemorrhage spoken of before. Although securely bound to the operating table the patient resisted the administration of ether vigorously, going under its influence slowly. When fully anæsthetized Dr. Mynter, acting in the absence of the attending surgeon, Dr. Phelps, sutured the thyroid cartilage with three silver wires; the other tracheal structures were approximated as nearly as possible with gut sutures, a catgut ligature was thrown around the external jugular vein, and the wound closed with gut sutures, save a small opening in the median line, where an iodoform gauze pledget was placed to give vent to any air that might have escaped from the tracheal wound. A strict antiseptic dressing was applied. Very little shock followed; pulse at 8 P. M., an hour after the second attempt, 110, of good force and volume.

As the effect of the ether wore off his struggles became more severe and frequent, endeavoring continually to reopen the wound. A hypodermic dose of morphia sulphate .03 cm. ($\frac{1}{4}$ gr.) was exhibited with no result. Likewise an enema of whiskey, chloral and bromide potassium, given in full doses. The struggling gradually gave away to exhaustion, death occurring at 10.20 P. M., from heart failure.

TRAUMATIC HÆMATOMA OF SUPRA-CLAVICULAR REGION.

A. M,, aged 21, a laborer by occupation, while at work, fell head downward about ten feet, striking his right shoulder on a post. The fall made him unconscious for a short time. Upon being picked up immediately afterwards it was noticed that a large tumor had developed, in the right lateral cervical and supra-clavicular regions, about as big as an orange. The tumor then extended from the angle of the jaw downward and forward to about one inch from the clavicle. At this time it was also noticed that the right hand was blanched, cold, and could not be used with as much freedom as its fellow on the opposite side. Entering the hospital one week later, being sent here by Dr. Murdock, of Bradford, he gave the following history: Family and former history good.

On regaining consciousness, after the fall of a week before, he noticed the right hand felt numb and cold, that it was pale, but that he could use it, although with some unusual effort, and that on his neck was a tumor as before described. During the weeks succeeding he noticed a steady diminution in the size of the tumor, a gradual increase in the warmth of the hand, and added ability to use the extremity. Otherwise he felt as well as ever.

Physical examination gave, in right lateral cervical and supraclavicular regions a tumor, not definitely localized, about as big as a hen's egg, and only extending some two inches above the clavicle; no lateral pulsation, but at times a slight arterial lift, assumed to be transmitted; no aneurismal bruit; tumor soft and fluctuating; an entire absence of pulse in the right arm and hand; whole right extremity cold and darker in hue; no paralysis; left pupil markedly dilated; mitral regurgitant murmur at heart apex. Otherwise his physical condition was normal.

Diagnosis made of traumatic hæmatoma, whose downward extension on the subclavian artery had entirely obstructed the brachial circulation.

Dr. Park being absent (the case having been sent to him) Dr. Phelps made an incision in the most dependant part of the tumor, evacuating about 100 c. c. of dark grumous blood; the cavity was irrigated with a solution of corrosive sublimate, packed with iodoform gauze, and dressed with bichloride compresses. The opening slowly filled up by granulation, while the inflammatory zone about the tumor entirely disappeared, the hand becoming warm, lighter colored and serviceable.

At times, if the patient exercised vigorously, a faint radial pulse could be detected, probably due to collateral circulation; aside from that, the pulse never returned. What bearing, if any, the dilated pupil or the mitral murmur had upon the case is a matter of conjecture.

THIS, the latest parody on Sullivan's operatic song, "Three Little Maids from School," is much in vogue among the students of Bellevue:

Three little maids from the seminary
Met three boys with the secondary;
Now they all take mer-cu-ary,
    Three little maids from school.

—*The Doctor.*

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SOME IMPRESSIONS OF THE NINTH INTERNATIONAL MEDICAL CONGRESS.

The Ninth Congress is now a thing of the past, and a brief notice of the impressions it has left may not be out of place. And first of all, in a numerical way it was certainly a grand success. Nearly three thousand members registered before its adjournment—a number second only to that in attendance at the London Congress. In point of fact, the number registered at London was largely made up of resident members, so that more non-resident members attended the Washington Congress than have been noted at any of the previous gatherings. But when we ask *who* these non-residents were, we must confess that with the exception of perhaps two hundred they were of American birth and residence. In other words, they were for the most part residents of the States who constituted this *international* gathering. We noted the names of many distinguished foreigners, nevertheless, and were pleased to meet and greet Graily Hewett, Simpson, Savage, Tuke, Owen, of London; Chavasse and Caton, of Liverpool; Landolt, Abadie, Galezowski, LeFort, Apostoli and Terrier, of Paris; Unna, of Hamburg; Martin, of Berlin; Assaky, of Buda-Pesth; Reyher, of St. Petersburg; Semmola, of Naples; Durante, of Rome; Grant Bey, of Cairo, and many others. Such men as these shed a lustre upon the meeting, of which, without them, it would have been destitute.

What have we to say of the management of the whole affair? Of its general conduct, this: We have no sympathy with the movement by which the men originally nominated for officers of sections were ousted from their positions. This partook of a feeling of petty animosity and jealousy, extremely discreditable to all concerned. On the other hand, we have equally little in common with those men who, being ousted, said to themselves: "Now that we are 'out,' let us do all we can to ruin the Congress and keep others from making it a success; let us all combine to make it a conspicuous and dismal failure; let us show that without *us* nothing of the kind can succeed."

It has been amusing during the past few months to watch the manœuvres of each party; it was both amusing and dispiriting to see the result. For it must be said that many of the representative men of this country were absent—men who could have added much to the dignity and scientific value of the occasion. Had they been present we should have had fewer mediocre and more really valuable papers than were in fact presented. On the other hand, what shall be said of their determined and concerted absence? Have they injured themselves or others? Who has suffered the greater loss? We incline to the opinion that the absentees have. We understand how these men could feel that their self-respect would be lowered in case they attended the Congress; and yet we fail to understand how they could so unanimously play the rôle of dogs in the manger, and so concertedly try to keep their foreign brethren from having anything to do with it. In that they have acted thus we hold that they have not acted one whit better than did those who made the trouble in the first place. And so it appears to us that the (dis)-honors are easy.

Still it must be said that a great deal of good work was done in the sections. The sections which were best attended were those on Surgery, Gynæcology, Obstetrics, General Medicine, Psychology and Dentistry. Drs. Marcy, Apostoli and Martin in the section on Gynæcology read most interesting papers, the latter being listened to with a double interest because of their well-earned reputation. In the section on Surgery by all means the best papers read were by two Americans whom the home profession are glad to honor, Parkes and Senn. The former gave a resumé of his work on gunshot injuries of the intestines which has made him famous.

The latter gave the results of probably the most original and exhaustive work published during the Congress. Senn first took up the question of operative interference with cases of intestinal obstruction. He showed among other things that when the ileo-cæcal valve is made patulous to fluids injected from below it is at the expense of such dilatation of the cæcum and rupture of its peritonæal coat as must in almost every case of itself prove fatal. Then he demonstrated two entirely new operations: one the grafting of pieces of omentum in any and all parts of the abdominal cavity; the other, the use of absorbable plates of decalcified bone for the purpose of effecting a connection between any two parts of the alimentary canal. His method is most novel and ingenious; it reduces the time necessary to effect the desired result to about a sixth of that formerly required, thus reducing the shock by a similar divisor; and it bids fair to be much more successful in every respect than has been the old way. Not content with this remarkable demonstration of his originality he described an absolutely new method of making bloodless operations about the head and neck, by a median incision over and isolation of the trachea, and constriction of all the rest of the neck by an Esmarch elastic tourniquet; the circulation through all the vessels, save the vertebral, being thus directly controlled,—the vertebral being amply sufficient for temporary brain supply. Should this method prove all that it bids fair to, it will create another era in the advance of surgery toward the goal of mechanical perfection. These two papers of Senn's only confirm our previous estimate of the man, already given in our editorial pages, that he is the most indefatigable surgical investigator and profound worker now living in this country, if not in the world.

Some of the sections were poorly attended; for instance that on otology, where not a baker's dozen were to be found. It was with no small pride that we noted the very full attendance and the great interest manifested in the section on psychological medicine, most ably presided over by our fellow-townsman, Prof. J. B. Andrews. He made a model chairman, and was the recipient of many compliments. His section presented, perhaps, a better list of papers, on more varied and more important topics, and by men from more widespread localities, than any other. Some of the chairmen were altogether too lax in discipline, and manifested too little interest in the preparation of their sectional work. To be sure some of them met with considerable difficulty inherent to the manner in which their positions were obtained;. yet we are thoroughly ashamed of the feeling manifested by certain specialists through the country, as if, when they catch cold, all the rest of the profession must sneeze. We recognize the importance of and the necessity for specialists, but we believe that they are indebted to the medical world at large for their position and eminence rather than the reverse. And so while we believe in and practice a specialty, we yet regard it as but subservient to that common good for which we all strive. Thus regarding it we look with feelings of regret upon all ill-advised attempts of certain cliques or societies of specialists to wreck the success of any general or deliberative meeting of the profession at large, no matter what the provocation. Saying this by way of apology for certain shortcomings in general and sectional management, we yet think the selections were not always the most judicious nor the most happy that could have been made. To say more would be invidious and unpleasant.

The general sessions were very pleasantly and auspiciously opened by the President of the United States, who in one brief sentence declared the Congress opened, and the Honorable Secretary of State, who delivered a most telling and scholarly address of welcome. It is rarely that one hears such good sense and grace of diction combined, be the occasion what it may or the speaker who he may, and the gifted statesman, who held his audience spellbound during a quarter of an hour, may feel that this, if not the greatest, was by no means the least of his triumphs.

The opening address by the President of the Congress was hardly up to the mark. It was delivered with some difficulty, and struck us as rather a chapter of platitudes than a learned address to the leading body of medical men of the civilized world. It seemed a grand oportunity slighted. Dr. Unna, of Hamburgh, delivered a noteworthy address on the relations of the study of dermatology to that of general medicine, which was well received. Dr. Semmola, of Naples, gave an address which, it was supposed, would be a resumé of our present knowledge of bacteriology and its widespread relations; instead of this he took a position which placed him at least ten years behind the times. We could not but conclude that as an Italian senator he has sacrificed the study of the medical and physical sciences to the practice of politics.

Dr. Blandford, of London, also gave an address on the treatment of recent cases of insanity in asylums and private houses, which created a very favorable impression. Neudörfer and Luteaud, who were to contribute additional papers, failed to appear, and excuses were made for them. Finally Flint, of New York, scored a success with an address on the causes, mechanism and treatment of fever.

Of the purely social features of the meeting we do not need here to speak at length. But since such features are made a part of every gathering of scientists, a reference to them may be permitted in a scientific journal. The first evening was opened by a so-called reception at the pension office, whose truly immense hall was crowded, not so much by the invited guests as by the uninvited, and even the unwashed rabble—a mistake of the local committee. The second evening was devoted to a reception by President and Mrs. Cleveland at the White House. Here was apparent another error on the part of some one, though just where the blame belongs we do not know. Everybody was admitted, and consequently everybody went, no effort being made to exclude those for whom it was not given. The result was that members were kept waiting an hour and a half before gaining admission, while the President appeared exhausted. Wednesday night was devoted to receptions at private houses, which passed off in the most pleasant manner. Thursday evening was given up to a "buffet banquet" at the pension office again, where the Marine band discoursed their sweetest music, where poor champagne flowed freely, too freely for some, and where, as a high government official remarked, the "'great American hog' showed off to good advantage, with the 'great American sow' a good second." Friday evening a charming reception was given to the foreign delegates at Secretary Whitney's elegant country home. Saturday closed with free excursions to Mount Vernon and Niagara for the visiting guests from abroad.

Private suppers innumerable were held, and Monday evening the Association of American Medical Editors banqueted their foreign brethern in quite an elaborate manner, with a profuse wealth of floral decorations, abundance of mediocre speeches (with two or three brilliant exceptions) and worse wine.

Altogether the week passed gaily, and withal successfully from a scientific point of view; and if everyone who attended was not thereby the gainer, it was purely his own fault. Such gatherings have their justification on the score of general utility, and while the work done is not usually of the very highest order, they yet accomplish much in the way of general acquaintance and good fellowship, which need always to be cultivated since they conduce to professional liberty, fraternity and equality.

PROPHYLACTIC TREATMENT OF MALARIA.

At Rome, in the year 1880, Tommasi-Crudeli first made known his experiments with arsenic in preventing malaria, and recommended the use of gelatine tablets impregnated with arsenious acid which could be conveniently divided into small squares, thus facilitating accurate dosing. In 1881 and 1882 the results of this treatment were studied by Ricci, physician-in-chief of Italian railroads. In the first year the epidemic was mild, but in the second it was very severe. In three sections, which were in charge of very conscientious physicians, 455 employes, among them fifty-four women, were treated with the gelatine tablets in the following manner: Two mgr. of arsenious acid were given once daily for four days, when the dose was increased to double the amount, and increasing at the same intervals until eight mgr. were administered daily. On several occasions more than this was given with no untoward results. Of these 455 individuals treated, 338 were either freed of the fever or never had an attack. With forty-three the results were negative, and with the remaining seventy-four, doubtful. However, there was reason for believing that the last two groups did not take the tablets regularly. Appetite and strength increased in all without an exception. Similar results were obtained by land-owners in the Campagna Romana and along the coast. Lemon juice was also mentioned as possessing some power to prevent malaria.

Recently he has reported corroborating results obtained by Dr. Magnani in Servia, in 1885. Also, that the *Academia dei Lincei* had suggested to the government that experiments be tried on their officials and employes who were obliged to reside for a long time in malarial districts, and that the military surgeons opposed it on the ground that arsenic is not borne well in tropical climates. Dr. Leslie, who was government physician on the Congo for two years, found no difficulty in administering arsenic and reports the best of results. He says that malaria is prevalent there at all times, and that he always made an interval of two weeks between every six weeks of treatment. He further states that to his knowledge no person so treated had a severe attack of fever, and that in his opinion success depended entirely on the regularity with which arsenic was taken. In cases where it was irregularly taken he easily controlled the fever with moderate doses of quinine.

Tommasi-Crudeli considers the "plasmodium malariæ"—formerly supposed to be a living organism—to be a form of degeneration of the red corpusle. This opinion has been confirmed by Masso (Rome), who has succeeded in producing the same degeneration without the intervention of the bacillus of malaria, by antiseptically introducing a quantity of blood from the carotid of a dog into the abdominal cavity of a chicken or pigeon. After three days the same form of degeneration of the red corpuscle was found in the clot, thus proving that it is not an organized being.

MEDICINE OF THE ARABS.

During the ardor of proselytism and thirst of conquest following the teachings of Mahomet the Arabs sadly neglected the arts and sciences as well as commerce. Fanatic with religious zeal they did not cease from destruction and warfare until in 640 Egypt was conquered, Alexandria, its capital, seized, and the famous library of that city, containing 500,000 volumes, was destroyed by order of Omar the Second. Then their ambition suddenly changed and the Califs now spared no efforts in attracting the savants of all countries, regardless of religious convictions, to their courts and began collecting and translating the writings of philosophers and physicians. They established schools, academies, libraries and hospitals, and in a short time students from all parts of Europe went to Arabian schools to be instructed in what was termed the arts and sciences of the Saracens. Of course a period of intellectual activity like this could not fail to bring forth illustrious men, and we read of four physicians whose superiority and erudite writings made for them a place in history. The first in historical order was Rhazes, a Persian by birth, and who flourished at the end of the ninth and beginning of the tenth centuries. Arabian historians say he was a universal genius, accomplished in music, astronomy, mathematics, chemistry and medicine, and that at the age of thirty years he was the most distinguished professor of the Academy of Bagdad. Among a hundred excellent physicians he was selected to take charge of the grand hospital of that city. His career was brilliant and successful unto his eightieth year when loss of sight compelled him to quit practice. He had acquired rare skill in the knowledge and management of disease, and was called the Experienced. Of his many writings on philosophy, medicine, history and astronomy, the most are lost. We have two treatises on medicine from him. A short one dedicated to the Calif Almanzor, and which contains the following excellent advice on choosing a physician:

"Study carefully the antecedents of the man to whose care you propose confiding all you have most dear in the world; that is to say, your health, your life, and the health and life of your wife and children. If the man is dissipating his time in frivolous pleasures; if he cultivates with too much zeal the arts that are foreign to his profession, such as music and poetry; still more if he is addicted to wine and debauchery, refrain from committing into such hands a trust so precious. He merits your confidence who, having early applied himself to the study of medicine, has sought skillful instruction and seen much disease; who has united to the assiduous reading of good authors, his personal observations; for it is impossible to see everything, and try everything in one's own practice."

His greatest work is entitled: "Continens," and is a collection of extracts compiled from all authors for his own use, but contains nothing which is not found in the Greek authors, except indications for some new remedies introduced by the Arabs, and a special mention of eruptive fevers under the name of Variola. These diseases having been first described by Arabian physicians were thought to have originated in Arabia, but Rhazes quotes Galen as recognizing variola, and considering the postules as indicating a species of crisis. It would seem, therefore, that Rhazes did not consider it a disease peculiar to his country. It may be, too, that the Greeks classed these diseases under the head of pustules and exanthemata.

Haly-Abas, also a Persian, is the next physician of eminence. He lived about fifty years after Rhazes, toward the close of the tenth century. Among his writings the Almalkei (opus regium) is the best, being a complete system of the theory and practice of medicine. It is generally regarded as the best work on medicine written in the Arabian language.

Then comes Avicenna, born at Bokhara, and called the Prince of Physicians. From early youth he was devoted to the study of the sciences, and after completing the courses in philosophy and medicine in the University of Bagdad, he was received at court and loaded with honors. But he suddenly fell into disgrace; was deprived of his property and positions, and come very near losing his life. After two years he regained his freedom and again became very popular. But excessive labors and intemperance soon undermined his health, and he died of dysentery at the age of fifty-six years. He is the author of several books on medicine, the principal one is the so-called "Canon," or law. This was for five or six centuries the medical code of Asia and Europe, but like all other works of this age it is largely a compilation. "After Galen no author enjoyed so wide and durable an authority in the medical world as Avicenna." His writings, however, are very theoretical and philosophical, and exceed in subtilety those of Aristotle and Galen. In fact all philosophical teachings in this age consisted almost entirely of subtileties of language.

Avicenna was the first to classify rationally the eruptive fevers. He included them under the general head of epidemic pestilential fevers of which there were two classes. First, Variola, including all those in which the eruption consisted of pimples more or less large and prominent, and filling up with any liquid. The second under the name Morbilli, embracing all those in which the skin is covered with spots, pimples or patches not containing fluid.

It would seem that the ancients considered eruptions as "epiphenomena," and of little significance since they produced at the worst only external deformity; and made the febrile symptoms, as indicating the state of the vital forces and intensity of danger, of paramount importance. The Asclepiadæ, who made no account of tetters, lepra and the like, may well have overlooked the smaller eruptions which left no scar or mark, and thus failed to distinguish and describe the eruptive fevers. Then, again, there may have been at this time an extraordinary prevalence of these fevers, or they may for the first time have spread beyond the limits of Arabia. However that may be, Arabian physicians were the first to describe and classify them.

The fourth distinguished physician of Arabia was Albucasis, a native of Cordova. He lived in the beginning of the twelfth century, and of his writings we have an abridgment of the theory and practice of medicine, of which the only new feature is a treatise on surgery. It forms a sort of supplement to his work, and really does him more credit than all the rest of the work. It is divided into three books. In the first he speaks of the diseases which require the cautery, and of the various methods of applying it by fire and escharotics, with the instruments used and the precautions to be taken. Strange to say he employs the cautery in a multitude of cases, *e. g.*, in beginning curvatures of the spine and in spontaneous luxations. The second book treats of the operations performed with cutting instruments. Here he also describes forcible delivery, the extraction of the afterbirth, the administering of clysters and blood-letting. Worthy of special remark is the fact that whenever it became necessary to examine the genitals, a woman, whose business this was, was always employed, and her statements believed and recorded as facts. Thus it happens that Albucasis reports several cases of women who threw off ten embryos at one time, and of another who cast off seventeen. The third book treats of the methodic cure of luxations and fractures, which department of surgery, the author says, at that time was given up to men of "vulgar and uncultivated minds," and for that reason had fallen into deepest contempt. Nothing is said of dissections, making it reasonable to suppose that they were not tolerated in those days, and that the author probably never practiced them himself.

Though anatomy and physiology made no progress among the Arabs, pathology did, and especially therapeutics. They introduced mild purgatives, such as cassia, senna and manna, which replaced the drastics of the ancients. They also introduced the use of syrups, confections, tinctures and distilled waters.

The many friends of Prof. M. D. Mann will rejoice to hear that he has entirely recoved from his recent illness and is once more actively at work. While singularly fortunate himself in having but a comparatively mild attack he yet had to undergo the anxiety and mental torment of knowing that one of his children was lying sick with the same malady, at some distance away from him. In this instance the disease was extremely severe, and after being for a few days in an encouraging condition Miss Helen Mann sank rapidly and died soon after she had been joined by her father.

Thus passed away a young lady who at the outset of her womanly career gave promise of being all that is interesting and lovely and noble. We are very sure that in this sad bereavement the Doctor and his family will receive that affectionate sympathy and earnest condolence which the sad circumstance would so naturally evoke. There is always something in cordial pressure of the hand and the sympathic expression of a friend which may help to make lighter the bitterest trial. That his may be thus assuaged in our most earnest hope.

* * *

The Forty-second Annual Session of the Medical Department of the University of Buffalo opened on the twentieth ultimo in a most auspicious manner. Dr. Hopkins delivered the opening address which will be found in our current pages, and which will well repay perusal. The number of students matriculated was announced to be unusually large, and every department was reported to be in the best condition for work. The number of Pharmacy students also enrolled was said to be nearly double that of the previous session.

* * *

The members of the I. C. I. Society, composed of graduates and undergraduates alike, made the occasion of Dr. Stockton's accession to the Chair of Theory and Practice the opportunity for tendering to him a banquet at the Genesee. This was given September 21, and was attended by at least fifty gentlemen. An extensive "spread" was provided, with a long list of toasts and speakers, while the new incumbent found himself in the midst of a circle of old and new friends who welcomed him and toasted him to his heart's content. It was certainly a most gratifying introduction to his new associations, and one which he has well deserved.

Correspondence.

GERMAN HEALTH RESORTS.

KREUTZNACH, August 10, 1887.

The German methods of securing health differ in many ways from the ways of Americans, and the following account, if at all worthy a place in the *Medical Press*, will secure the space because practical methods are less commonly understood at home than German theoretical medicine. We all know how thoroughly the German Universities prepare students for the practice of our profession, and yet we see but little in medical journals that tells of the layman's experience during sickness. In the first place the medicinal springs of Germany are so numerous, and differ so widely from each other in their properties, are so fostered, both by government and by private enterprise, and so generally visited by all classes, that they constitute a feature of the country.

It is not deemed at all necessary that one should be ill in order that he should repair to Ems or Kreutznach or Wiesbaden for "the cure." It is done, as a matter of course, by thousands who do not look as if they needed a physician. The gain comes in the immunity from sickness for the rest of the year. The drinking of the waters is by no meams all there is of "taking the cure." In nearly all these health-resorts the same general plan is followed, and it has been so long the custom of the place to rise early; exercise in the open air; sip more or less of the water; take a light breakfast, and exercise some more; rest an hour or two and again have a simple and light meal, then at four in the afternoon promenade again by the cure-house or drink hall, while the same band that played so finely from six to eight in the morning, again charms and enlivens one; and then at six the substantial dinner, and from eight to ten another concert and promenade followed by early to bed. All this is so much of a custom that it has become a law that few have the temerity or inclination to evade.

The hotels are so arranged as to promote out-of-door exercise, and everything about the town itself is arranged with the same general end in view, viz., much open air, temperate indulgence in simple, well-cooked foods; no excesses in wines; regular exercise, and long nights of sleep, all this continued for a definite period, about six weeks as an average, and with scrupulous attention to all the hygienic rules of the place, and it is no wonder that the springs have a reputation for miraculous cures. When one sees how universal is the custom among brain-workers to take the cure at some spring once each year he appreciates for the first time why neurasthenic or nervous exhaustion, or American nervousness, as the condition is variously called, is almost unknown abroad.

I have talked with many intelligent and some distinguished physicians, both in Great Britain and on the continent, who had seen little or nothing of the nervous breakdown above mentioned so common to all of us at home. The contrast between these resorts where all the German people go, and the fashionable Saratoga or Richfield, where all Americans go, is as great as between the impetuous rush of the American and the slow and persevering energy of the German. I have not yet seen at the German springs any hotels with any luxurious parlors or piazzas which seduce the weak purposed patient into inactivity; neither have I seen any toilets to speak of, nor many carriages, for all are encouraged to walk; nor any bar-rooms where men in some countries do congregate, nor any table so loaded with harmful luxuries that an Anchorite would surely fall if he sat at them; neither racing nor betting, nor dancing in hot parlors.

On the other hand the scenery is very bold and impressive in this volcanic region of the upper Rhine where the majority of the springs are located, the air is especially invigorating and delicious, for it comes from many an evergreen covered mountain and sweeps down the valley untainted by man, or by factories built by man; the out-of-doors concerts are very fine, the walks and drives most charming, and the fare at the hotels always good of its kind, simple and substantial. I believe that the efficacy of the cure at any of these famous resorts is based more upon these external surroundings than upon the internal administration of the waters. Their advantage over American springs wholly depends upon the peculiar influences of climate, diet, exercise and rest.

Ems is beautifully situated in the valley of the Loahn at an elevation above the sea of two hundred and ninety feet, the narrow valley bounded by evergreen mountains that rise almost precipitately from one thousand to fourteen hundred feet above the level of the valley, making the most picturesque scenery, as well as furnishing positions for hotels at any desired altitude. The air is exceedingly dry, something like our Adirondack air; the rain-fall in summer is slight. There are about twenty thousand visitors annually, of whom about twelve thousand take the cure. It was interesting to me to note the nationalities. In 1885 two hundred and nine Americarns, nearly seven thousand Germans, about four hundred each French, Dutch, Russians and English, and various numbers from four (Portugese) to seventy-three (Roumanians) from nearly every known country of the globe. The waters vary in temperature in different springs from thirty-one rm. to forty rm., and there is also considerable variation in the daily temperature of each spring. Practically all the waters are alike in other respects excepting that one has a little iron and one lithia; all are weak solutions of the carbonates, lime, soda, potash, etc., with considerable free carbonic acid gas. Hundreds of these springs bubble up in the bottom of the river, and as showing their common origin it is stated that when the water in the river is high the springs on the shore are much more active and have a higher temperature. The facilities for bathing are perfect; the water being artificially heated and given at any temperature. Many English go to Ems for uterine troubles, old pelvic inflammations and sterility, the iron spring having a great reputation, though I believe the excellent English physician there cures more people than do the waters. An admirable arrangement for vaginal douching I noticed. In the bottom of the deep porcelain-lined bath tubs is a small rubber hose to which a vaginal tip is attached and the water forced at any given temperature through this while the patient sets in a hip or full bath. The rule is to continue this douche for an hour.

The Germans go to Ems for catarrhal troubles. Here the Crown Prince was treated for his throat trouble which I was assured by the doctors there was not malignant or specific, and here also the Emperor spends much time. An inhalation house, where men spray for ten minutes each day either the nose or throat, the engines for compressing air and the apparatus for medicating the waters being admirable, is one of the features of the place. Dr. Reuter, who directs this part of the work, is an exceedingly bright and accomplished man. He said he treated hypertrophic catarrh mainly with galvano-cautery; that the chromic acid method which he had thoroughly tried was not permanent enough in its effect, and that medicinal applications were practically useless. I saw his apparatus and asked him why he did not send the patients home after he had removed the cause of nasal and pharyngeal catarrhs. He said the air at Ems was dry and free from germs; the baths and exercise in the open air aided and the inhalations kept the membranes free from accumulations, and that the rest helped to restore the general health. His theory of the production of catarrh by hypertrophic nasal membrane and deflections of the septum and bony obstructions causing diminished air pressure, etc., is exactly the same as enunciated in this country by F. H. Bosworth and other throat specialists, and his treatment the same. Therefore, pharyngeal catarrhs are cured at Ems, and they are also cured at home. I observed many ladies in wheel chairs, and was told that this was a feature of the Ems management of uterine and pelvic inflammations. The patients could walk, but were not allowed to do so while under treatment, and they were kept in the open air and amused in this manner instead of being kept in bed. Aside from the fact that this made these sufferers unpleasantly conspicuous, the idea is certainly a good one. The German mind, however, is not so sensitive, perhaps, on such points as the American.

This letter has grown to such length that I must leave the special features of other springs for a future communication, and close by assuring you that I am sincerely thankful that I am an American physician, even though our country is not yet so civilized in the matter of wholesome health resorts. F.

Society Proceedings.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Meeting of Tuesday, September 6, 1887.

Reported by Chas. G. Steele, M. D., Secretary.

Dr. J. B. Coakley presided. There were twenty-nine physicians present. Dr. Julius Pohlman was elected a member. Drs. Thomas G. Allen and George L. Brown were proposed for membership.

Dr. H. E. Hayd read an interesting paper on "A Visit to the New Brunswick Lazaretto." He described the hospital and detailed several of the cases he saw there. In discussing the paper Dr. Herman Mynter told of a visit he made last winter to the largest hospital for lepers in the world, which is in Norway. He referred to the difference of opinion which exists regarding the etiology and pathology of leprosy. Dr. Danelson of Norway believes that tuberculosis and leprosy are the same. Dr. Hansen believes the disease is caused by the bacillus, which he has discovered. Dr. Hansen has, however, failed to innoculate a patient having the anæsthetic form with the tubercular. Dr. Hansen claims that leprosy is contagious; Dr. Danelson that it is hereditary.

Dr. Mynter read a paper on "Aneurism of the Inominate Artery," describing a case which he operated on at the Buffalo General Hospital, when he tied the external carotid and sub-clavian arteries. The patient was shown to the association, and she has improved greatly since the operation. Drs. S. Y. Howell and H. G. Matzinger gave a microscopical demonstration of the bacillus leprae.

Dr. Bartlett read a voluntary communication on "A New Treatment for Dysentery." This consisted in making local applications of the bi-chloride of mercury to the rectum and colon. A flexible catheter may be introduced into the rectum about ten inches and attached to a Davidson syringe. The bi-chloride is to be dissolved in hot water, one grain to the pint. From three pints to three quarts can be used. It must be allowed to enter the bowel slowly and then passed off. A quarter of a grain of morphine should then be administered. The doctor has followed this treatment in sixty-nine cases, with marked success. When the stools are dark and slimy he gives first a dose of castor oil. Dr. Charles Cary asked Dr. Bartlett if he had had any experience with water alone. Dr. Cary had found cold water to be potent. Dr. S. W. Wetmore said he had given the bi-chloride by the stomach for the past eight years. He gives it in 1-100 of a grain doses. Dr. Bartlett, replying to Dr. Cary's question, said he had used plain water but never saw any other result than the washing away of matters accumulated in the bowel. He laid stress on the promptness with which the bi-chloride solutions act, and held that this treatment is cinative.

Dr. Bartlett related the case of an abortion in a young woman, at the fourth month, with retained placenta. The doctor placed a tampon in the vagina, and in two days the placenta was expelled and the woman made a good recovery.

Dr. Wetmore related a case of rupture of the uterus, which had occurred in Mrs. Wetmore's practice. The woman was in labor two days when Mrs. Wetmore called the doctor and he applied the forceps. A dead child was brought, and upon making an examination the doctor found a rent in the uterus. The woman died at once. The woman was thirty-eight years of age, and a primipara, and Dr. Wetmore thought that there had been atrophy of the muscular tissue, thus rendering it easy of rupture.

Selections.

GOODFELLOW ON THE IMPENETRABILITY OF SILK TO BULLETS.—A somewhat extensive experience in the gunshot wounds of civil life, during the past few years, has brought to my attention the following instances illustrative of the remarkable tenacity of silk fiber and its resistance to the penetrative power of a bullet: In the spring of 1881 I was a few feet distant from a couple of individuals who were quarrelling. They began shooting. The first shot took effect, as was afterward ascertained, in the left breast of one of them. Upon stripping the body, I found not a drop of blood had come from either of the two wounds received. From the wound in the breast a silk handkerchief protruded, which I presumed had been stuffed in by some of his friends to prevent bleeding. I withdrew it, and with it came the bullet. It was then seen that it had been carried in by the ball. Upon opening the body, the track of the ball was found to be as follows: through the left ventricle, thence through the descending aorta; thence into and through the body of either the second or third dorsal vertebra into the spinal canal, fracturing the laminæ. The ball came from a cut-off Colt 45-caliber revolver, fired at a distance of six feet, the cartridge of which contains thirty grains of powder and two hundred and sixty grains of lead. The man had on a light summer suit, the handkerchief being in the breast pocket of the coat. Examination of the handkerchief showed only two slight tears or cuts in it, they being on the outside of the fold containing the bullet, where it had struck the bones of the vertebral column, no ribs having been touched. There were two thicknesses of silk covering the bullet. In a short time a still more remarkable case was observed. During a fight a man was wounded at a distance of thirty feet by a load from a shotgun. The cartridge contained four drams of powder and twelve buckshot. Four of the shot penetrated the frontal bone, and, as shown by the autopsy, flattening themselves against the posterior wall of the skull; more entered the face, piercing the facial bones, and some passed through the upper thoracic wall, thence into the lungs. At the time he was shot he had loosely tied about his neck a red-silk Chinese handkerchief. In the folds of this I found two buckshot, neither of which had so much as cut a fiber of the silk. There were four or six folds of the silk between the balls and the skin. The uncertainty as to the number of layers arises from the fact that, not wishing to damage the specimen, I never have unfolded the handkerchief to ascertain exactly. The third case was that of a man wounded at a distance not exceeding three feet, by a ball from a full-length, 45-caliber Colt revolver. The ball entered the right side of the neck two inches below the angle of the jaw at the posterior border of the sterno-cleido-mastoid muscle and emerged on the left side at the angle of the jaw. The head was turned slightly to the right at the time the bullet struck him. Around his neck was loosely tied a red silk handkerchief, as in the preceding case. The ball catching this carried a portion of it through to the wound, then slipped off, leaving the handkerchief in the wound uncut.—*Southern California Pract.*—*Analectic.*

Psoas Abscess: When and How to Open it.—At a recent meeting of the British Medical Association, Mr. Edmund Owen read a paper on the above subject. Mr. Owen said there was no disease the treatment of which had derived a greater impetus from the introduction of antiseptics than psoas abscess. By antiseptics he did not mean the use of the spray. The spray was now cooling down in more senses than one, and the surgeon did not now have to look through a cloud of carbolic vapor at his patient. By the use of antiseptics he meant antiseptics as used by the great masters in surgery, whether by Tait, Gamgee, Savory or Lister. Twenty years ago every surgeon preferred to leave a psoas abscess alone, so long as it remained unopened. Stanley, writing forty years ago, said psoas abscess might disappear. Could it? Mr. Owen said that in an extensive out-patient experience, extending over years, he had only seen one case in which, after a fusiform tumor had been detected ascending along the iliac fossa, he had seen it disappear. Aspiration was useless, for it refilled. When evacuation of the abscess was performed, it should be done thoroughly, and no useless temporizing measures be made use of. A free anterior and posterior opening should be made, and the wound thoroughly drained. The sac should be washed out with a warm antiseptic lotion, and a drainage-tube the size of a cedar pencil passed through. The wound should then be covered with sublimate gauze, then some oakum placed over it, and the dressings changed as seldom as possible. He had employed as the antiseptic lotion a warm solution of corrosive sublimate (1 in 1000). He should, however, in future, discard the use of the sublimate, as he had had a case which died in four hours with black urine, due, he believed, to the absorption of the sublimate. Mr. Owen, in concluding, summed up his conclusions as follows: 1. Spontaneous absorption of psoas abscess is impracticable. Sooner or later it must be evacuated, either by nature or art, and the advantage is on the side of art. 2. The sac should be opened both in front and at the back, and irrigated. For a small abscess a single opening at the back might suffice. 3. Antiseptics should be employed. 4. The operator should bear in mind that pus might collect on the opposite side after evacuation of the abscess. If any rise of temperature take place, a second abscess should be suspected, and, if found, evacuated at once. Bilateral abscesses should be attacked simultaneously, as their cavities frequently communicate. In reply to a query from a member as to the source of his method, Mr. Owen replied that was neither English, French, Scotch, nor Italian, but Welsh, thereby signifying that the idea was his own, and that he had not borrowed it from anyone.—*New York Medical Record.*

THE ANTIVIVISECTION LAW IN ENGLAND.—In his recent address before the British Medical Association Dr. Whitla, president of the section in pharmacology and therapeutics, said: "There is, perhaps, no sadder aspect of scientific medicine in this country than the present position of pharmacology. The restrictions imposed by a shortsighted legislature, warped and swayed in its judgment by noisy and clamorous agitators, have driven us into the humiliating position of looking to the more favored investigators in other countries for those solid materials out of which, to a large extent, we must rear a truly scientific treatment of disease. It is, perhaps, as well for the science of medicine that, after all, in the most favorable view of the case, few men can be expected to devote themselves exclusively in this country to the study of the action of remedial agents and substances upon healthy organisms, otherwise the treatment of disease might soon become utter chaos, as years of careful and clinical observation and experience are often heeded for the laying down of correct rules by the practical physician or therapeutist before the discovery of the pharmacologist can be of much value. Indeed, at the present moment, though we justly mourn over the paucity of pharmacological material, there is evidence that in many directions it is far in advance of our therapeutics. The most sanguine view of our present position and the rate at which we are progressing must convince us that as practising physicians we might be doing more in the direction of applying, utilizing, and perfecting the results of recent pharmacological discoveries if one of our greatest barriers to progress is to be found in the ever-increasing number of new drugs which pours in upon us at a rate which prevents that thorough testing of their qualities and actions so necessary before the range of the new weapons can be accurately determined.

ATKINSON ON SCARLATINA AND SCARLATINIFORM ERUPTIONS FOLLOWING INJURIES AND OPERATIONS.—Unprotected persons who have suffered injury, or who have undergone surgical operations, are rather more liable to scarlatina than the unprotected healthy. This increased liability is probably due to diminished power of resistance from disease, and will probably hold with regard to other specific fevers. Scarlet fever is more apt than the other exanthemata to attack such persons, because its influence is usually more widespread, and because it varies within such wide limits that it often escapes the attention of those who readily detect other infectious disorders, and provide against them. When an epidemic tendency of the symptoms we have been considering to prevail after injuries and operations is shown, it may be concluded with confidence that true scarlatina is present. Septicæmia is occasionally accompanied by a scarlatiniform rash, which does not depend upon the scarlatinal poison. Medicinal eruptions, especially those from cinchona and its preparations, not infrequently follow injuries and operations. These rashes are probably for the most part usually attributed to true scarlatina or septicæmia. In obstetrical practice, scarlatina is unquestionably capable of exerting a most noxious influence, but as the distinctly scarlatinal symptoms are here decidedly less important that the obscure and dangerous systemic symptoms that the virus seems to induce, the writer does not presume to enter upon the discussion of this branch of the subject before this Association. He inclines strongly to the opinion, however, that in so far as concerns a distinctly scarlatinal rash in these cases, the line of argument followed in this paper is equally applicable.—*Journal Cutaneous and Ven. Disease, October, 1886.*

HALE ON THE RELATIONS OF THE HEART AND REPRODUCTIVE ORGANS IN WOMEN.—Previous to puberty little or no sympathy exists between these organs, but towards that period there springs up a wonderful interdependence. It is at this period that the heart begins to beat with new force and frequency, and becomes far more sensitive to influences from within and without than before. Palpitation is apt to occur from slight causes and uncalled-for attacks of localized hyperæmia, as exemplified in blushing. Girls rarely blush before the age of puberty, and the age of true blushing declines after puberty is established. It occurs again during pregnancy, and also at the change of life, for at these epochs the heart is enlarged and its nervous system becomes hypersensitive. At this age he often had patients sent to him supposed to be suffering from heart-disease, and complaining of palpitation, irregular action of the heart, and precardial distress. Medicines were of little avail in such cases. The cardiac trouble in such patients is generally physiological—that is to say, due to influence transmitted to it by the developing reproductive organs. Unless occurring in scrofulous or rheumatic subjects, little medical treatment is called for, the physical habits alone requiring to be regulated. Undue exercise should be forbidden, and the emotional nature should be restrained. Late hours and the too promiscuous mingling of the sexes at balls, etc., should be avoided. If not, a genuine cardiac affection may result. Occasionally a displacement of the womb, a flexion, or a congested or abraded cervix will give rise to cardiac disturbances of great intensity. Ovarian irritation of various kinds has the same effect. It is important, therefore, to eliminate any such source of trouble. The next great epoch in a woman's life, wherein is found a reflex irritability of the heart from the reproductive organs, is during pregnancy. Many women are made aware of conception having taken place by a peculiar action of the heart. All through the period of gestation, palpitation, flushing, and blushing, etc., are observed. The enlargement of the uterus and the necessity of carrying on a greatly increased circulation in its walls during pregnancy are attended by a temporary hypertrophy of the heart, mainly affecting the left ventricle. After delivery the heart soon returns to its normal standard. Care in diet, exercise, and dress, is therefore necessary during pregnancy, in order to avoid any trouble from this source.—*From Archives of Gynæcology, August 1886, in London Medical Record, December 15, 1886.*

A Cure for Warts.—Take fifteen grains of corrosive sublimate and dissolve in one ounce of collodion. Brush the warts carefully once a day with this solution. This remedy is efficacious and more convenient than other recommended procedures.—*Zeitschrift d. Oester. Apotheker-V.*

THERAPEUTICS OF NEURALGIA OF THE HEAD.—Eulenburg emphasizes the great value of massage in the various neuralgic affections of the head. The affected parts are both to be beaten rapidly (tapotement) and to be gently stroked (effleurage). Besides, even if the seat of the affection be in the forehead, the occipital region is to be likewise treated. Etiological factors, such as obesity or heart-disease, are to receive due attention. Internally antipyrin, in 15-grain doses, is the most efficient remedy. Galvanization is often useful.—*Wien. Med. Presse.*

Book Reviews.

DRUITT'S SURGEON'S VADE MECUM; A MANUAL OF MODERN SURGERY. Edited by Stanley Boyd, M. B., B. S., F. R. C. S. Twelfth edition. Pp. 986. Philadelphia: Lea Bros. & Co. 1887.

SURGERY; ITS THEORY AND PRACTICE. By William Johnson Walsham, F. R. C. S. Pp. 658. Philadelphia: P. Blakiston, Son & Co. 1887.

Could the student of even six years ago have had one or the other of these text-books how much better practitioner he would be to-day! We can think of no better illustration of what is meant by "the advances of modern surgery" than a comparison of this twelfth edition of Druitt's manual with its predecessor issued ten years ago. In the eleventh edition, which appeared in 1877, antiseptic methods are made to appear as still on trial; ligatures are left hanging out of wounds; the extra-peritoneal method is recommended in ovariotomy, and we are directed to hang a box of Macdougall's powder under the bed-clothes to keep down the stench arising from an amputation stump! Think of this advice and reflect on the phenomenal advances of one decade!

These works are refreshingly new and interesting. It is, to the student of surgical literature, a genuine pleasure to pick up a text-book in our vernacular and see at last a clear distinction made between septic intoxication, septic infection and pyæmia. Not a single manual has appeared, either in England or America, until very recently, in which any clinical or pathological differences were pointed out, and yet our advanced teachers have been making them for some time. It is pleasant to see, too, for example, an adequate description of the suppurative process, and of the agents which determine it. Even on the opening pages of these two manuals may be found abundant evidence that their writers are alive to what pathologists are doing, and believe that clinical study is not to be divorced from laboratory research. The teacher who has waited so long for *the* book for students may now rub his hands with a species of glee when he finds such a disease as erysipelas properly classified and its bacterial origin squarely acknowledged without apology or evasion.

Concerning individual excellencies we can hardly stop to speak at length. Druitt's work was long ago a standard, and those features which made it so popular have not been disregarded; thus its general arrangement and its systematic brevity have not been lost. But rewritten as it virtually has been by Mr. Boyd it is essentially a new work, and redounds to its new editor's credit.

Walsham's hand-book is essentially new, somewhat smaller than the former, but sacrificing nothing that a student needs.

When we inquire concerning these two authors who have given us so much to commend we find that they are men of the present generation, occupying junior positions in London hospitals, with evident love for their work, who have had the independence to depart from the conservatism and the backwardness of their elders, and who have given us the best manuals that—along with Treves'—we have to-day.

Of the clinical and applied features of the surgeon's work, they have treated fully and succinctly, with due regard to the happy practices of our forefathers, yet keenly alive to the certitudes of to-day. Long-winded directions in operative technique are relegated to the larger treatises; the effort of each writer has been alike to talk directly to the point. Druitt's being somewhat the larger, is naturally the more full; aside from this both works are alike admirable, and constitute most important additions to surgical literature.

THE STUDENT'S GUIDE TO DISEASES OF THE EYE. By Edward Nettleship, F. R. C. S. Third American from the Fourth English Edition. Pp. 475. Philadelphia: Lea Bros. & Co. 1887.

Nettleship's treatise has since its first appearance been a favorite with students, and now that it has appeared in new dress it is not destined to lose in favor. It opens with a very sensible chapter on optical outlines which are the fundamental principles of much that concerns the eye. The chapter on external examination is succeeded by one on practical examination as to color blindness, acuteness of vision and hearing, as demanded in the testing of railway employes, contributed by Prof. Thomson of Philadelphia. In this is briefly outlined the system now practised among the men employed by the Pennsylvania Railroad, whose results have been so extremely satisfactory to the company as well as to its patrons. This chapter alone should prompt every railroad surgeon to possess a copy of the work. Under the heading examination by artificial light are included both the method by lateral illumination, and that by the ophthalmoscope.

The various diseases are then considered, passing from without inward, and commencing with the lids. In speaking of trachoma the author takes the ground that the projections from the mucous surface are not granulations in the strictly pathological sense, but rather new formations. In the matter of errors of refraction and accommodation, while concise he is singularly clear and instructive. The operations are all grouped together at the end of the volume, where is condensed quite a treatise on operative ophthalmology. A concluding chapter on the relation of eye diseases to general affections, which is worth careful study, brings to a close a most entertaining and valuable manual, which should find a large sale.

THE PRINCIPLES OF ANTISEPTIC METHODS APPLIED TO OBSTETRIC PRACTICE. By Dr. Paul Bar, Accoucheur to the Maternity Hospital, Paris, etc. Translated by Henry D. Fry, M. D. Philadelphia: P. Blakiston, Son & Co. 1887. Cloth, pp. 175. Price, $1.75.

In no department of medicine have antiseptic mothods saved more lives and given more gratifying results than in midwifery, so that at the present day the physician who ignores them is guilty of criminal neglect. A glance at the chart of the mortality at the Paris Maternity is convincing, showing a remarkable fall of from 20.3% deaths in 1864 to 1.1% in 1883.

The first chapter treats of the relation of the germ theory to the puerperium; then follow chapters on the antiseptic method and agents, influence of antiseptics on puerperal epidemics, disinfection as an antiseptic measure, hygiene of the puerperium, antisepsis during labor, antisepsis during the third stage of labor, antisepsis during the puerperium, antisepsis in catheterization, the antiseptic method in rupture of the uterus and in the Cæsarian operation, with an appendix on antisepsis of the umbilicus and on ophthalmia neonatorum. The various antiseptic procedures adopted in some of the principal institutions of Europe are also described.

Dr. Bar, though an enthusiastic advocate of antiseptics in this field, is conservative and allows himself to be guided by precise indications only. The printing and binding are good, making it withal a timely and very acceptable book.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI, AT ITS THIRTEENTH ANNUAL SESSION, held at Macon City, Mo., May 10, 1887.

The printing is done well and on good paper. The essays, reports and discussions are given in full, and are interesting and varied. We can't but congratulate the association on its success in passing before the General Assembly of the State of Missouri *An act for the promotion of medical science by the distribution and use of unclaimed human bodies for scientific purposes, through a board created for that purpose, and to prevent unauthorized uses and traffic in human bodies.* This is a great achievement, and while an index to the push and zeal of the profession of that state, also reflects creditably on the legislators of the state of Missouri.

PROCEEDINGS OF THE NINTH ANNUAL MEETING OF THE NEW YORK STATE PHARMACEUTICAL ASSOCIATION, June, 1887.

Aside from the many features that must make it very interesting and valuable to the member of this association as well as the pharmacist who is not yet connected with that number, there are departments in this report that are interesting to the practitioner as well. Such are, for instance, the report of the committee on adulterations, the revision of unofficinal and officinal formulæ, and many of the answers to queries. So, too, the laws regulating the practice of pharmacy, the licensing of persons to carry on such practice, the sale of poisons, etc., in this state.

The whole report is proof positive that the association is an active working institution, and does it credit as well in appearance as contents.

BOOKS RECEIVED.

From E. B. Treat, New York:
Manual of Insanity: E. C. SPTIZKA.

From Blakiston, Son & Co., New York. Through Peter Paul & Bro.:
Manual of the Practice of Surgery: W. J. WALSHAM.

From Lea Bro.'s & Co., Philadelphia:
DRUITT'S Surgeon's Vade Mecum.

From Geo. S. Davis, Detroit:
Diarrhœa and Dysentery: A. B. PALMER.

Transactions of the Missouri State Medical Association. 1887.

From D. G. Brinton, Philadelphia:
Lessons in Gynæcology: WILLIAM GOODELL.

WANTS, EXCHANGES, &c.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

A NOVEL DEPARTURE IN ADVERTISING.—Believing that the advertising of medicinal preparations often fails of its purpose, viz., to clearly and intelligently present to physicians their special advantages, pharmacal or therapeutic, on account of the fragmentary and imperfect manner in which the facts are usually conveyed in such advertisements, Parke, Davis & Co. propose to inaugurate rather a novel departure in advertising.

It is their intention to publish in the advertising pages they occupy in medical journals a series of what they term plain talks to physicians, in each issue taking up a certain class of preparations and pointing out the reasons why they deserve to be prescribed, until all their preparations shall have thus been presented.

The excellence of the products of this house are well known, and it is to be presumed that their long experience in the manufacture of medicines will enable them to say in informal talks something of real interest and benefit to their medical friends.

I HAVE had occasion to use, in my practice as physician, "Colden's Liquid Beef Tonic," and can fully recommend it as extremely useful in cases of debility and general depression. In the sick room, as an article of food, combining at the same time tonic properties, it is highly useful. In all cases requiring strengthening nourishment, such as aged persons of weak digestion, it may be given with *advantage.* [Signed] A. JACKSON, M. D., Quebec, 20th May, 1873.

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TYPHOID FEVER: *

What are the Indications for Treatment; and are Relapses or Untoward Complications Favored by Antipyretic Measures?

By Chas. G. Stockton, M. D.
Prof. of Theory and Practice of Medicine, Med. Dept. Univ. of Buffalo.

Writing in 1825, Eberle begins his valuable work on practice with these lines: "The history of practical medicine consists of little else than a review of the doctrines which have successively risen and sunk again, concerning the nature and treatment of fever." And his words appear to have been as prophetic of the succeeding sixty years as they were historic of the past. There seem to be at length good reasons for believing that the pathology of fevers is being cleared up.

But when we come to compare our present views with those entertained by our grandfathers, we perceive that modern pathology extends to us very little that was not offered by old pathology, which is more than suggestive of improved treatment. That is, they knew that quinine and bark, arsenic and zinc, were able to subvert intermittents; and that mercury and quinine were of positive benefit in remittents; but when it came to continued fevers, many drugs were tried but none attained a satisfactory reputation.

And to-day, we know no more about intermittents or remittents; and if we have learned to summon more powerful agents, to assist us in coping with continued fevers, we surely cannot claim to have found any that are positively more effectual than those in use half a century ago. For before this time Currie (1787) had taught the use of baths, and, soon after, the plan of "feeding fevers," so much dwelt upon by Graves in later years, was understood and practiced by physicians in this country (Flint's Practice).

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* Being part of a discussion on Typhoid Fever, held at the New York State Medical Association, New York, Oct. 5, 1887.

It has required the experience of all these years to mould our views into what might be called "improved modifications" of old methods, but there are no new theories of treatment, justly so named, that have gained any established position in the esteem of the practitioner. Nor do recent pathological investigations promise us more light than was had when such fevers were first known to come from without, when it was known that some unwholesome factors entered the human organism through air, food or water, and when it was known that quinine paralyzed some classes of these factors; and that other classes refused to be paralyzed by anything save a warfare with living tissues, for, granting the triumphs of the microscope and the culture tests, when it comes to treatment, what does it signify whether we call it vibriones or filth, bacilli or bad air; we were sure that there was something within which came from without and which could not be destroyed by the means at hand.

Possibly it is premature to speak so slightingly of our therapeutical resources for breaking up fevers.

There have always been found those willing to maintain that some measures would abort or greatly shorten typhoid. Chief among these measures were venesection, cold baths and the administration of calomel and quinine. At present there are some who believe that external cold will abbreviate and lessen the intensity of fevers, and others who maintain that enormous doses of quinine, if given early enough in the career of the attack, will actually cut short a typhoid and prove harmless to the patient.

These views I cannot entertain. There are cases in which the pyrexia is so great that, for antipyretic purposes, the cold bath or quinine may be well suited, but when it comes to breaking up the disease without breaking up the patient, I believe that our resources are entirely unavailing—recent contributions to the contrary, notwithstanding. German physicians who formally thought to abort the disease by the very early and free use of calomel, apparently now have reached the opinion which Nothnagel has voiced in a recent lecture, that "Calomel seems to shorten the disease." Ziemssen has lately expressed similar views and says: "An abortive action of calomel, such as has been claimed by Wunderlich, has not been shown. Griesinger, then Baumler and, more recently, Weil, have shown that neither the mortality is lessened by calomel, nor the number of aborted cases increased." It has been for some years common practice, without expectation of aborting the disease, to administer to typhoid patients five-grain doses of quinine every four or six hours, hoping thereby to mollify the intensity of the attack. Observation teaches that this dosing has little influence upon the temperature; what, then, is the object of the medication? It is said in reply, that the patient feels better with the quinine; that the pulse, the nervous system and the intestinal tract behave better under its influence. Now I will not deny that this may be true of some cases, and it will probably be found that these cases are malarial as well as typhoid subjects, but if uncomplicated cases are affected favorably by this routine treatment, such results have not been demonstrated.

The clinical thermometer, not only revived the practice of Currie, but it inaugurated the reign of antipyretics in general, and out of the faith that it was the temperature that destroyed and not so much the disease behind the temperature. This faith is evidently waning; however, it has still a potent influence in directing the management, both in fever wards and in fever chambers.

Nearly every one admits the peril of allowing the temperature to range from 103 to 106 F., and the propriety of using some means to lessen the body heat, if for no other reason than adding comfort to the sick man; but it is now said, almost by common consent, that antipyretic measures do not lessen the severity or shorten the course of the fever, which is in antagonism to the doctrine and teachings of Brandt.

Of the various methods employed for cooling the body, the cold bath or pack, the twenty or thirty grains of quinine at a dose; the antipyrine or the antifebrin in quantities sufficient, it may be said of all that they generally accomplish their purpose for a while, and if the temperature is so elevated as to disturb and threaten the nervous system, or the heart, they should be permitted as a lesser evil than the great heat; but if, after their use, the improvement of symptoms generally is not manifest and the depression of the temperature is merely temporary, then antipyretic measures had better be omitted, for the vitality of structure has enough to oppose in the *materies morbi*, without having set against it also the *materia medica.* The practice of using frequent sponge baths of tepid or cold water is generally sufficient to keep the temperature within reasonable limits; besides, this practice does not fatigue the patient, but often affords him rest and a degree of comfort not otherwise attainable. Doubtless there are some cases in which drugs are the most beneficial antipyretics, but sponging should be tried first and is likely to satisfy the conditions; but, if not sufficient alone, used in connection with antipyretic drugs, sponging will so assist their action that smaller and less frequent doses will prove effectual.

This method of combining the use of the sponge bath and antipyretic drugs is sometimes very unsatisfactory, and for reasons that are unknown to me. During the past few weeks I have studied a series of hospital cases that were treated according to the following rule: "If the temperature approaches 103 F., use the sponge bath. If soon afterwards it rises above 103 F., give .250 of antifebrin." The bedside notes showed that in certain cases the temperature not only continued to rise, but rose more rapidly after the use of the bath, but declined uniformly after the antifebrin. Thinking that repetition of the baths at half-hourly intervals might accomplish the desired end, such an experiment was made, but the temperature was not controlled until the hour for a natural decline occurred. In order to satisfy myself on this point, two very similar cases were selected; one was given antifebrin alone, and to the other only sponge baths were allowed. After the first twenty-four hours the temperature in each case was well in hand, with fewer baths given to one and less antifebrin to the other. I do not suggest that these facts are constant in typhoid fever, but am satisfied that there is this incompatibility in a fair proportion of cases.

There are occasions when the body heat may be reduced easily by the judicious administration of opium, sometimes in small and stimulating, and at other times in larger and somewhat sedative doses. By its use the nerve centers are rested and the circulatory system strengthened and regulated. Reference is here made to the general and not to special uses of opium, such as checking diarrhœa or preventing hemorrhage.

Alcohol has come to be one of the most common remedies in treating fever, and while it is often indispensable and commonly useful, it requires to be given at the right time and in the right portion. To begin with alcohol is usually bad practice, and to end with alcohol is usually good. When to commence it and how to regulate its administration with due regard for the effect upon the brain, the heart, the tongue, the skin, are frequently questions requiring a nicety of that kind of judgment which age and ripeness alone bring to mankind. As a food, alcohol is at times our sole dependence, but even as a food, it should not be given with too great generosity.

It really seems that the question of feeding is one in need of critical examination at this time. The revulsion from the antiphlogistic methods has led to a practice of stuffing, rather than feeding. It is not now so conspicuous as it was ten years ago, when it was thought necessary to pour milk, enriched with cream, and beef tea boiled in a bottle, down the throats of resisting and nauseated fever victims—apparently with the belief that the more nutriment the patients put out of sight the better were their chances of survival. This barbarous prodigality in feeding was often kept up faithfully even when the tortured intestinal tube evacuated the ailment undigested about as fast as it was introduced, although efforts were put forth to hold the indigestible mass where it was supposed to belong, by giving astringent diarrhœa mixtures.

While this manner of feeding,—stuffing,—much to the gratification of domestic economy, has subsided in considerable degree, exhibitions of it are still manifest and it would therefore seem profitable to give the question some attention.

About the first sign of an approaching typhoid is the loss of appetite, and anorexia accompanies the malady until near the end. Now, with rare exceptions, where there exists a distaste for food, there is also inability to digest and assimilate it. It is a matter of general belief that stomach digestion in all fevers is very imperfect; and it seems unreasonable to expect the intestine, which, through much of its extent, is going through a process of infiltration, sloughing and cicatrization, to do much digesting. It is surprising that it performs its office as well as it does; but at best it is seriously crippled in function as well as structure, and is incapable of more than moderate work. In view of these facts, what possible good end can be subserved by tormenting the intestine with an ever-coming burden of fermentimg milk curds aud beef tea? Does not this procedure rather embarrass nature and jeopardize the patient? On this question it would seem that we must reach two conclusions. The first is that only a limited amount of nourishment should be administered. The second is that this should be administered in that form which makes the least work for the crippled digestive apparatus. In other words, we should give our patients small amounts of liquid food, and this, very frequently, should be peptonized, the amounts to be varied in different cases and different stages of these cases, governing ourselves, not by the watch and measure of milk, but by the effect that the feeding appears to have on the sick one; in short, managing the administration of food by a somewhat analagous rule to that which applies in the administration of alcohol at the same time. Let us not think that, because a food is partly digested, it may be given in large quantities, nor that the several digested foods are alike relatively valuable to all persons and at all stages of fever. Certain idiosyncrasies and dyscrasies continue their modifying influences when fever is present and when fever is absent. It is very doubtful if one is justified in saying that milk, peptonized, is always a suitable diet in these cases. There are doubtless those who assimilate and progress satisfactorily under the use of any of several beef preparations, and others, again, who receive with much greater benefit some starchy food, either dextrinized or reinforced with those extracts of malt which are rich in diastase. The extract of malt alone constitutes a most nutritious, and to some, not unpalatable diet.

It is generally said that water is to be allowed in unlimited quantities. This must, of course, be construed as a figure of speech. There are some present who have heard patients express the wish that they could have a hose connecting the hydrant to the mouth; and some of us have seen patients drink water with a lavish profusion that suggested such an arrangement of matters. I can conceive of no good reason why the question of water should be left to the morbid thirst, perhaps local in nature, or perhaps due to some irritation of nerve centers that may be soothed by small amounts of opium but by no amount of fluids. On this point we have a warning from Dr. Da Costa, who teaches that an abundant, but not an unlimited, supply of water be permitted, for the reason that the vessels of the stomach, being constantly charged with water, will not readily take up the liquid food, the rapid absorption of which is so essential. In the middle course is the safest way.

One should never omit to say, in speaking of the treatment of typhoid fever: first of all, a large, airy, sunny, quiet room; a well made single bed; an intelligent trained nurse, by whose foresight and tact the wants of the patient shall be anticipated and the needs of conversation and disturbance avoided. The good nurse first and last. If needs be, we can dispense with the cold bath, with antipyrin, even with the doctor, but with the faithful, ministering nurse —never.

The question, "Are relapses or other untoward symptoms favored by some antipyretic measures?" while of great importance, is not one likely to be treated with the greatest impartiality. Inquiry reveals the fact that those committed to any particular method for lowering body heat, feel confident that this is unlikely to induce untoward symptoms if judiciously employed, and outside those bearing upon relapses in relation to the cold baths, there is a paucity of reliable statistics on this subject. As regards the cold bath, the opinion prevails that relapses follow its employment in larger proportion than after any other mode of treatment. The proof of this is pointed out in certain hospital reports, notably those of Basle. If it be true that undoubted relapses, not confounded with mere temporary returns of fever from dietary indiscretions or other mismanagement, have been found more prone to follow the cold bath than any other plan of treatment, may this not be for the reason that hitherto the cold bath has been the most successful means of keeping the temperature low? and may it not be possible that when the temperature is kept continuously low by *any* measure, subjects become more liable to relapses?

This question can be answered only by long series of carefully recorded cases treated with antipyretic drugs, compared with those treated on the expectant plan. I am not aware that sufficient material for such comparison exists. Individual opinions of clinicians seem about equally divided on the question. Since the theory of endogenous reinfection to explain the recidive is generally accepted, it does not seem unreasonable to believe that certain antipyretics, either by their action on the bacillus, or on the tissues of the body, might become factors in the restitution of infection within the organism. That such a possibility exists as a matter of fact, is not the belief of those who have had the largest experience in the use of antipyretics. In a valuable paper read before the New York Academy of Medicine (*Medical Record*, Jan. 8, 1887) Dr. Baruch discussed this question, and although he showed that for ten years ending with 1885 there had occurred in New York city 7,712 cases and 3,184 deaths, an average of 41.28 per cent. of mortality, and for a period of about three months during the last autumn a mortality showing an average of 34.63 per cent., it was not shown, either by him or the able gentlemen discussing his contribution, that greater mortality occurred under the antipyretic plan of treatment; nor was it found, from the scanty statistics available, that the percentage of relapses was greater when antipyrin or antifebrin was used than when the expectant plan of treatment alone was followed. As to untoward results, other than relapses, following the antipyretic treatment, much has been said during the past two years regarding the supposed bad effects of antipyrin, and, later, of antifebrin, upon the heart and other organs. General depression, with special reference to the circulatory apparatus, coldness and profuse sweating are said to follow, not infrequently, the use of these drugs; but it is but fair to raise the question if it be not the over-use, either as regards frequency or size of dose, that induces such depression. Clinical reports of cases from various parts of the country exhibit evidence of such dosage with antipyrin as to suggest the possible misapprehension of its true place in therapeutics. If the remarks of a recent writer, that " with antipyrin he succeeded in getting a higher death rate, but he thought the patients more comfortable," were based on an experience with cases in which the temperature was, by large doses, held near the normal point, then his observation becomes a warning against the *abuse*, but not the proper employment of the drug.

It has been suggested that the parenchymatous changes, the granular and fatty metamorphosis of liver, kidneys and spleen, found at the autopsies of fever victims who had antipyrin treatment, were the direct effects of the drug. Such views were expressed at a meeting of the New York Pathological Society last spring, but those holding these views should not forget that such lesions are characteristic of the disease ; and they should be able to show that in epidemics, wherein low or even sub-normal temperatures prevailed, there was an absence of such changes.

Doubtless such discussions are most timely, but to make them valuable, the drug should have a defense, as well as a prosecution.

In conclusion, the treatment of typhoid fever narrows itself to the preservation of the individual until the fever is spent. It is a question of waste and supply—therefore, a question of nutrition. In the administration of stimulants and sedatives, it should be borne in mind that the object is not to strike the assailant, but to defend the assailed ; so in the administration of narcotics. And when there is a temperature that threatens to destroy, we should lessen it, not by powerful means, with the hope of routing the fever, but by such measures as will least disturb the victim and most protect the nutrition, and therefore the functions of all the organs.

371 Porter Ave., Buffalo, N. Y.

RESECTION OF MAXILLA SUPERIOR FOR SARCOMA.

BY HERMAN MYNTER, M. D.
Surgeon Buffalo General Hospital.

[Read before the Dental Association of Western New York.]

I have asked the privilege of bringing a patient before your Association to-night, because he suffered from a disease, for which he would naturally in the start consult members of your profession, and because the disease, if recognized early, offers rather a favorable prognosis, while if overlooked or neglected in its start, it will require a formidable operation, and even then, in a majority of cases, will relapse and progress to a fatal termination under great sufferings. The patient is a German, 61 years of age, who was admitted to the General hospital, June 14th, 1887. He has a good family record and has always enjoyed good health.

Ten years ago he was much troubled with a bad tooth in the right upper jaw. After a time it was extracted, but a piece of the root was left, which has troubled him since, more or less. Ten months ago he first noticed a swelling of the right upper jaw, which has since steadily increased in size, but without being particularly painful. He consulted a dentist six weeks previous to his entrance into the hospital, who extracted a piece of the root, and since then the swelling has grown rapidly. During the last weeks before entering the hospital he had severe shooting pains and much tenderness of the growth. He lost his appetite, swallowed with difficulty and was rather emaciated. By local inspection a large tumor is seen to occupy the whole posterior half of the right superior maxilla, extending from the first bicuspid backwards. The whole maxilla superior is uniformly enlarged and protruding; all the molar teeth are lacking, and their place and the hard palate is occupied by a large, soft, fringed and granulated tumor, as large as an egg, which fills the whole right side of the mouth, emitting a very bad odor. Backwards it is easily circumscribed with the finger, and neither the soft palate nor the anterior pillars of the pharynx seem to be involved. No secondary affection of the glands of the neck is discovered. June 15th; operation under ether. Tracheotomy was first performed, and a large silver canula introduced, through which the narcosis was continued. A large sponge, attached to a strong silk thread, was then introduced into the pharynx to prevent entrance of blood into the larynx. The whole maxilla superior was then removed after Ferguson's method. An incision was made from the inner angle of the eye to the outer limit of the orbit, parallel with and a little below the infraorbital ridge, as described in "Agnew's Surgery," and another commencing at the nasal extremity of the first, and carried down along the side of the nose, around its ala to the columna nasi, and from there through the middle of the upper lip. The whole flap was then dissected up close to the bone, and the bleeding stopped by pressure with the fingers and a few ligatures. The periosteum of the floor of the orbit was then detached, a chain-saw introduced through the fissura orbitalis inferior, and the malar bone, and zygoma, cut through. The processus frontalis of the maxilla superior was then severed with the chisel, and lastly the processus palatinus cut through with a straight narrow saw, introduced through the nose. The superior maxilla, thus loosened from its bony connections, was then seized with a strong pair of lion-forceps, dislodged from its bed and drawn downwards, by which proceeding its attachment to the pterygoid process of the sphenoid was broken. Lastly the soft palate was severed with the thermocautery. After the moderate hemorrhage was stopped, partly with ligatures, partly with thermo-cautery, the wound was sutured with a great number of cat-gut sutures, and the large cavity filled with iodoform gauze.

June 16th.—Patient has rallied well and takes nourishment. The trachea canula was removed.

June 20th.—The gauze packing was removed. Some sloughing of superficial tissue observed, due to the thermo-cautery.

June 23rd.—The wound in the trachea has closed ; patient is sitting up ; the wound has united by first intention.

June 25th.—Patient discharged, with the large cavity granulating and rapidly filling up. By microscopical examination the tumor was found to be a round-celled sarcoma.

Since the operation four months have passed, and no symptom of relapse has so far presented itself. We may therefore fairly consider him cured, although there is, of course, a possibility of future relapse.

He feels perfectly well, is able to work, but swallows with some difficulty on account of the large opening in the hard palate, and his voice has a very pronounced nasal sound, so much so, that it is difficult to understand him. For that reason, Dr. Barrett has made him a prothesis of hard rubber, attached to the teeth of the left maxilla superior, by the aid of which his speech, as you will observe, is very much improved, and the swallowing easier. A cicatricial contraction of the mucous membrane, the result of the application of the thermocautery, by which he is prevented from opening his mouth widely, has given Dr. Barrett considerable difficulty in taking the impression.

The contracted bands might, of course, be cut through without difficulty. The deformity, as you will observe, is very slight on account of the dense connective tissue, which fills out the void. Our knowledge of tumors of the upper jaw has been modified by modern histological and microscopical investigations. I shall not here enter deeply into this subject, but only briefly state, that tumors of the jaw may be either non-malignant: as fibromata, osteomata and enchondromata; or malignant: as sarcomata and carcinomata, with their subdivisions, scirrhus, medullary cancer and epithelioma.

The non-malignant tumors take their origin either in the periosteum or the endosteum; may grow to an enormous size, but are not dangerous to life except by their size and complications arising from it; nor do they relapse after extirpation.

Under the name of sarcoma is understood tumors composed of "tissue, which is either embryonic, or which is undergoing one of the primary modifications seen in the development of adult connective tissue" (Erichsen). We distinguish different forms of sarcoma: spindle-celled sarcoma, round-celled sarcoma, fibro-sarcoma, chondro-sarcoma, osteo-sarcoma, etc. We may in general say, that the richer they are in cells the more apt are they to relapse after extirpation; the more connective tissue they contain, the less malignant. Free removal is necessary on account of their tendency to extend along the periosteum beyond the defined tumor.

The carcinomata are tumors of epithelial origin and generally of alveolar structure, infiltrate the affected part, producing induration and ulceration with secondary affections of the lymphatic glands and the internal organs.

Carcinomata generally attack people in middle life or old age; men twice as often as women.

In regard to the frequency of the different forms of tumors, no great reliance can be placed on the older statistics, gathered together before microscopical examinations of the extirpated tumor had become the rule.

Dr. Ahleman (*Arkiv. für Klinische Chirurgie, 1875*) reports 32 cases of total extirpation; of which 19 were carcinomata, 12 sarcomata, and one an enchondroma. He shows the carcinomatous growths to be the most frequent and agrees in that regard with other statistics. When we consider the question of the percentage of cures after the operation, there is more disagreement among the authors.

Ashhurst mentions 84 cases, of which 51 recovered and 33 died or relapsed, being 61% recoveries.

Agnew gives a table of 179 complete excisions, of which 80 recovered, being 45% recoveries.

Ohleman (*Arkiv. für Klinische Chirurgie, 1875*) mentions 32 cases. Of these 20 were total excisions, with 17 recoveries and 3 deaths, or 85% recoveries, but relapses occurred in all cases, some earlier, some later (1 to 3 years) and in no case was the cure permanent.

Braun (*Centralblatt für Chirurgie, 1876*) reports 11 cases of which 7 recovered and 4 died; but of the 7 recovered 5 had relapses and died later, so that only 2 were permanently cured, being 18%.

Estlander (in *Nordisk Medicinsk Archiv.*) gives a reliable, but small, statistic of 20 cases, which he followed to the end; 15 were men, 5 women, and the ages ranged from 27 to 69. Operation was impossible in 4 cases, and 4 others died after the operation of intercurrent diseases. Of the 12 left, 2 were finally cured—being 17%—while the rest died from relapse.

You see, there is a great difference of opinion, some giving 85% recoveries, others only 17%, yet the statistics from smaller countries are apt to be more reliable, as the cases generally may be followed to the end.

Estlander draws some conclusions from his statistics which are interesting. The average duration is generally about one year, the progress being a little more rapid with younger than with older patients. The patients generally present themselves just midway between the first appearance of the tumor and the fatal termination; so that the patient will live just about as long after the consultation as he has had the tumor before the consultation, and that, whether he be operated upon or not (cures not counted). Thus, if a patient has suffered six months before the consultation, he will probably live six months more; if he presents himself sooner (because the disease has made more rapid progress), he will die correspondingly sooner, but his sufferings will be mitigated and death made easier by the operation. A patient with sarcom would, according to him, ordinarily live one year. During the first six months the sufferings are not very acute and he would therefore not apply for surgical aid. If not operated upon he would still have six months to live. The same would be the case if a relapse occurred after an operation. If he submits to an operation, his chances of a permanent cure are equal to one out of six. Secondarily he has a chance of prolonging his life twice as long, but the probability that he will neither gain nor lose anything, so far as time is concerned, is four to one. He is only sure that the last months of his life will be more endurable, if he be not cured.

In partial excisions the percentage of cures is much greater, while it is slightly worse in total excision of both maxillæ superiores. The earlier the operation is performed the greater is the probability of complete cure; and just for that reason it is of the greatest importance to the patient that the disease be recognized early, when the tumor yet is small and may require only a partial excision instead of a total.

In regard to etiology very little is known. Dr. Ohleman states, that in some cases heredity was evident, in others an injury. In most cases no cause can be given, and it is impossible to decide whether a trauma gives the occasion to the abnormal development of the cells, or only favors it by the irritation it produces. The pain is generally ascribed to the teeth, and as they become loose they are extracted. In the course of one-half year the patients generally present themselves with a tumor as big as an egg, but else in good condition and without secondary affections of the glands.

The differential diagnosis is not difficult. The slow and painless development of the tumor, its appearance, the uniform enlargement, the loosening of the teeth, and the extension along the gum are sufficient to distinguish the trouble from periostitis, with its severe pain, increased generally by pressure on one tooth, its inflammatory symptoms, and its hard painful swelling of the bone itself. Abscess of the antrum of Highmore presents more symptoms of inflammation, the etiology is better known, and the dry parchment sensation is characteristic. An exploratory puncture will reveal pus. Lastly, a microscopical examination of a small piece of the tumor will guard against mistakes.

A few points deserve mention in regard to the operation itself. The greatest danger is the hemorrhage and the entrance of blood into the larynx and lungs. That the patients in some measure might voluntarily expectorate the blood, the operation was formerly often performed without narcosis, or with only a partial narcosis during the beginning of the operation. Even if this in some measure relieves the danger of entrance of blood into the larynx, it lengthens the operation considerably by the violent struggles of the patient, and the whole performance is horrible beyond expression. We have two other ways of overcoming the difficulty, either preliminary tracheotomy as in my case, or Roser's method of operating with declined head. Roser's method has the fault that it increases the bleeding, and is apt to produce acute anæmia. Max Müller mentions in *Arkiv. für Klinische Chirurgie*, 1875, such a case, and states that he never saw such a bleeding in twelve previous cases, in which Roser's method was not used. By preliminary tracheotomy we avoid this danger, and the narcosis can with the greatest ease be maintained through the tube. A Trendelenburg's canula is not necessary at all, as the pharynx can be blocked with a sponge; to which a string is attached, so that the sponge may not be swallowed, and not a drop of blood can enter the larynx. But tracheotomy has one disadvantage, that it produces paresis of the vocal chords, and that it therefore may be necessary to feed the patient for some days either per rectum or with a stomach tube to prevent the food from entering the lungs, which may be followed by pneumonia.

Lastly, I will mention one improvement in the operation described by Letievant. He conserves the infraorbital nerve, and by that, the contractility of the muscles of the face, he says, by chiseling open the canal and taking the nerve out. The statement about conserving the contractility of the muscles of the face is, of course, a mistake; as the infraorbital is not a motor nerve. Yet his operation has the advantage, that he leaves on both sides of the nerve a part of the bony margin of the orbit, also a part of the alveolar process with the incisor teeth. These three points prevent the sinking in of the flap and give it a good support.

TRANSPLANTING OF FLAP WITHOUT PEDICLE FROM ARM TO EYELID.

BY DR. LUCIEN HOWE.
Buffalo, N. Y.

[Read before the New York State Medical Society.]

The following notes of the treatment of ectropion by transplantation of the skin, without pedicle, form a contribution of further data to the question whether a considerable area can be covered by this means. I will first make brief mention of a case already known to some, sufficient reason for doing so being found in the fact that even during so short a time as seven years, the line of treatment has undergone a material change. This case is of value for comparison, and also for the reason that the flap was one of the largest that has ever been transplanted without pedicle. The patient was a young lady, who, when a child, had fallen into an open fireplace, the result of the accident being a large cicatrix covering the forehead on the right side, producing ectropion of that upper lid, so great that the lashes blended with the eyebrow. In the operation for remedying the defect, an incision was made from the inner margin, just above the line of the lashes on the upper lid, and the edge containing the ciliæ was drawn down and attached to the lower lid by means of three stitches; this left an elliptical wound which measures rather more than one and three-quarters inches in length, and over half an inch in width. I then took from the inner surface of the right arm a piece of skin, which measured three and one-eighth inches long, by one and three-eighths inches wide, of course elliptical in shape. This flap was thoroughly fastened in its new position, covered with a piece of gold-beater's skin, and the eye securely bandaged. Healing took place almost by first intention, and resulted ultimately, as the photograph shows, in an amount of improvement which almost entirely removed the deformity originally produced.

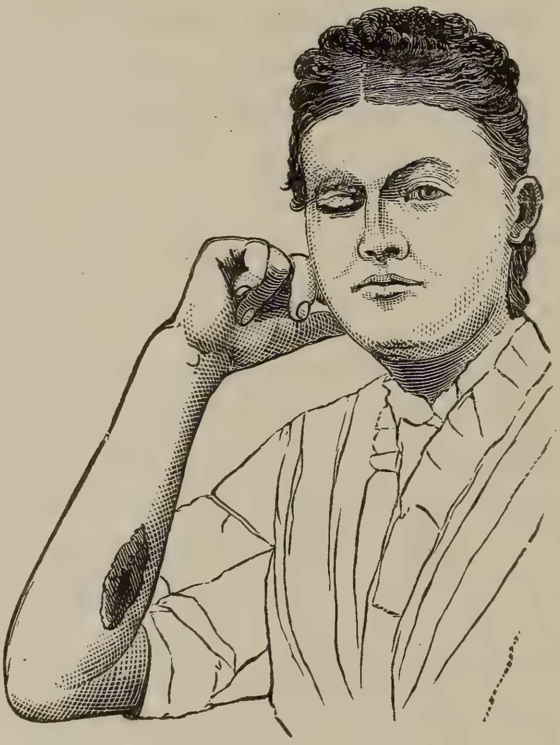


Fig. 1.

The shrinkage of the flap continued for some months after the operation, and although that was made over nine years ago, March 21, 1878, and I have had an opportunity of hearing from the patient several times of late years, still the improved condition continues as decided as when I last saw her about three months after the operation.

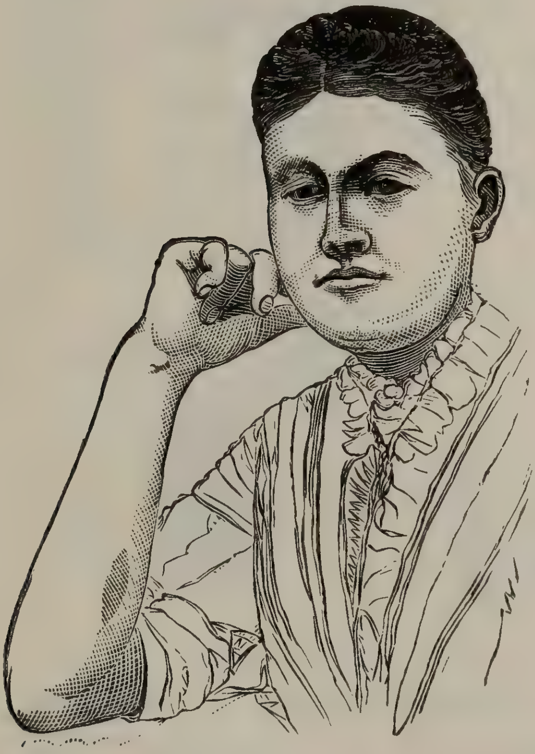


Fig. 2.

The second case to which I would call attention, was operated upon more recently, and I report it because of difficulties occasionally met with, but which can be overcome by this method. The patient, Mr. L. E———, of Buffalo, was fifty-six years old. Upon the lower lid of the left eye, near the inner surface, there appeared, some ten years ago, a small abrasion which later developed into a well-marked epithelioma; this had constantly increased in size until the time I saw him, on the 20th of November last, when it extended from near the inner canthus well out toward the middle of the lid, and infiltrated tissue could readily be recognized at least half an inch below its margin. The symptoms of which the patient complained, and also the growth, were so characteristic as to leave no doubt regarding the diagnosis ; an operation was therefore performed, at the Buffalo General Hospital, on the 9th of the following month. An elliptical incision was made under the margin of the lower lid in such a way as to include the entire growth ; this measured fifteen-sixteenths of an inch horizontally and an inch perpendicularly. To cover this a piece was taken from the inner surface of the right arm, measuring one and one-half inches in its long diameter by one and three-eighths across. As in the former case, four stitches were introduced at the extremity of its axis in order that it might be more readily manipulated. By the third day it was evident from the prominence of the graft that it had become fixed, and subsequently it was found to have healed in its position

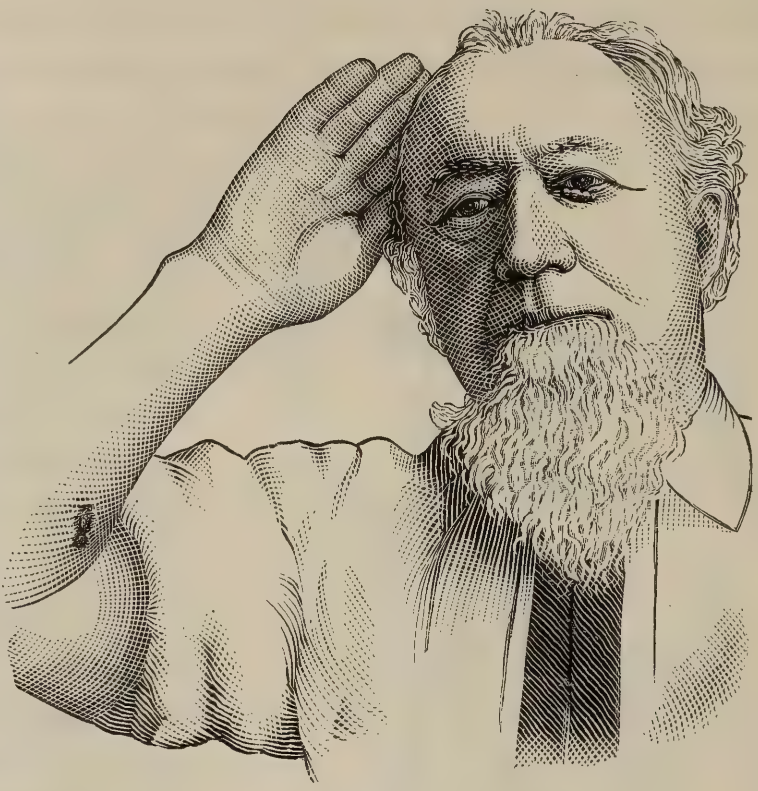


Fig. 3.

almost perfectly. The accompanying photograph was taken on the 19th of October, ten days after the operation. The piece was still irregular and apparently too large, but contracted afterwards, and the appearance of the eyelid was decidedly improved. Such is the brief outline of the second case. There is nothing new in the general procedure, and I have purposely left until the last, a comparison of the treatment in both cases, in order that the difference might become more apparent.

Only a few years ago it was considered best to direct attention principally to the proper adaptation of the flap to the wound, keeping the parts evenly and firmly adjusted, at the same time warm and dry. This was particularly my aim in the first case. In the second, it is true, the flap was adjusted as nearly as possible to fit the raw surface, but it was not kept-covered with the gold-beater's skin. Instead of that its edges were thickly powdered with iodoform, and only enough cotton placed over it to absorb the tears that flowed from the eye. This last method I considered a decided advance upon the first. With it the patient has more comfort, and the surgeon has an opportunity of constantly observing the graft without any interference, or, if necessary, of removing any secretion which may accumulate. The advantage of this method of operation in this position will be appreciated when it is remembered that even a slight amount of contraction such as usually follows a sliding flap not only produces some deformity, but results in a constant flow of tears over the cheek. Moreover, in cases of transplantation of flap without pedicle, even when the attempt is a perfect failure, still there is no loss of tissue, and other methods can be subsequently employed if desired. The resulting scar does not interfere with trial of sliding flap, or with the so-called Italian method, should either be necessary. It is beyond the province of a brief report like this to enumerate the various other advantages of this method. Many are too self-evident to require any comment. In view of the importance of the subject, it has seemed desirable, however, to place on the record any data tending to establish the operation on a warrantable basis, or add even a single observation concerning details which tend to make it a success.

A PECULIAR CASE OF CONSTIPATION.

BY M. A. VEEDER, M. D.
Lyons, N. Y.

The following case, which was attended by the writer, and is well authenticated in every particular, affords a remarkable illustration of the persistence of the constipation of the bowels which may accompany dysenteric conditions. On the afternoon of August 19th the patient had sixteen stools consisting of blood and slime intermingled with scybalæ. Before calling a physician a tablespoonful of castor oil had been taken, which produced copious evacuations. The pain, tenesmus and other symptoms were readily controlled by opiates and bismuth. On August 24th, the patient complaining somewhat of uncomfortable feelings in the abdomen, and the bowels not having moved in forty-eight hours, a dose of mercury with chalk was given and followed by Rochelle salts the next day. This treatment resulted in great apparent relief, the patient at once recovering her appetite and remaining free from noteworthy symptoms until September 1st. On this date there was a recurrence of uneasy sensations and cutting pains in the abdomen which were ascribed by the patient to the fact that her bowels had remained somewhat confined for several days. Thereupon she took another dose of castor oil, which caused several evacuations, which were not, however, profuse. The next day, no relief having been experienced, a physician was again summoned and it was found that the patient was suffering from fever, the temperature being 103° in the axilla. Until September 21st the temperature ranged between 100° and 102°. Throughout this attack the bowels moved slightly at times and there was considerable pain in the abdomen and some tympanites. On September 21st, as the fever was subsiding, an emulsion of turpentine was being employed, producing a gentle laxative effect, whereupon beans, together with scybalous masses of fæces began to pass from the bowels, continuing to do so until September 24th. The last time that beans had been eaten by the patient was three or four days preceding the first sickness on August 19th, consequently they had remained in the bowels seven weeks in spite of brisk cathartics and a diarrhœal condition which at one time was quite severe.

The relation of the fever, which was of a mild typhoid character, to this retention of local matter is not entirely clear, it being uncertain whether the retention caused the fever or vice versa. In any event the case is interesting, as showing the extent to which accumulations may persist in the bowels.

THE SO-CALLED OSSIFIED MAN.

A CASE OF CHARCOT'S DISEASE?

BY ROSWELL PARK, M. D.
Professor of Surgery, Medical Department, University of Buffalo.

The subject of the following sketch has lately put himself on exhibition for purposes of self-support, and having been invited to make a careful examination of his case, I have been not only convinced of the genuineness of the lesions he presents, but have been struck by their extent and pathological completeness. Accordingly I easily secured his consent to make the first accurate description of his case which has yet appeared, although he has been in his pitiable plight for thirty-one years. His home is near Lewiston, Niagara County, and I have frequently heard of him there; the accounts I have received leading me to suppose that his was a case of that exceedingly rare affection, *myositis ossificans*, of which scarcely twenty-five cases are on record. But on examination not one of the lesions peculiar to this disease are to be found, and his whole history and appearance are such that I am forced to consider it as approaching more nearly the so-called Charcot's disease than any other designated malady; and if I am right in this designation it is probably the most remarkable case of the kind ever recorded. But let it speak for itself.

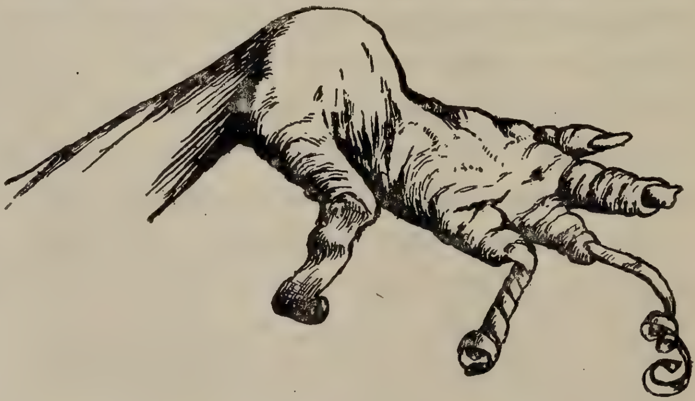
J. R. Bass was born near Lockport in 1840. His family history is one of rheumatism. His paternal grandmother, his father and mother, all had rheumatism severely during their lives. His mother died of lung trouble, his father of some other acute disease. He lost one brother in infancy; two others grew up, one died some months after receiving an injury of troubles remotely arising from it, the other is still living.

Was well up to the age of sixteen, save for an attack of acute inflammatory rheumatism when nine years old, from which he completely recovered. As a lad he had to work a great deal in the water, and his hips gave him considerable trouble at this time. During his seventeenth summer he had what he calls "dumb ague." During this summer he was one day suddenly seized with an intense pricking pain in the ball of the right foot, and the next day the foot was badly swelled; he supposed he had run something into the foot. Two or three days later the other foot swelled in the same way. His feet being useless he went around the house on his knees and hands for a week longer until his knees swelled and became so painful that he had to give up this method of locomotion. His limbs gradually became more and more useless, but it was seven years before his hips were absolutely stiff. During this time, also, his arms began to fail in the same way, the left one first. Nearly simultaneous were also the gradual stiffening of his vertebral joints and that of the jaw. For several years he suffered a great deal of pain; it was not until he was twenty that he became comparatively free from suffering.

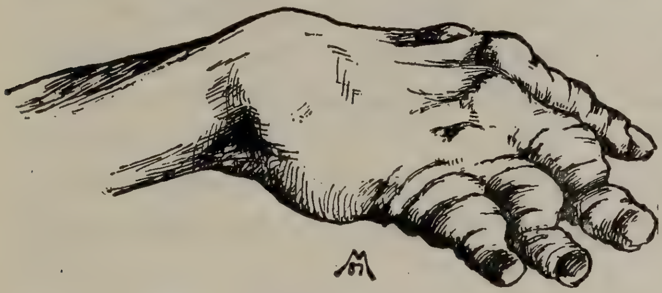
In 1857 he took to his present bed which since that time he has never left. This bed is provided with mechanical contrivances by which some slight change of position may be permitted and by which the whole body may be raised or lowered.

Present condition.—His general health is good. Present weight about sixty-five pounds. His bowels are quite regular; his appetite good. He sleeps fairly well. Several front teeth have been removed to permit the introduction of food. Both eyes are affected with cataract, and posterior synechiæ are nearly annular and complete in each; for seventeen years he has enjoyed only comparative perception of light. A two-way murmur is audible at the base of the heart. When turned over on the side and kept a few seconds in this position he becomes very dizzy and has to be laid on his back again.

The jaw is tightly shut and anchylosed. The entire spine, with its sacral and occipital joints is rigid; he lies with his neck slightly flexed and face turned a little to the right, in which position he has been for over thirty years. There is slight mobility at each shoulder; both elbows are straight and stiff. It is about the wrists and hands that the peculiar features of his disease are most conspicuous. Their shape began to alter when he was twenty-seven, though they had previously been stiff. In the left wrist the carpus has disappeared, and the ends of the bones of the forearm protrude underneath the integument. The metacarpal bones have altered somewhat and several phalanges are wanting, having been gradually absorbed. The nails on some of his fingers have not been cut for a long time, and are seen in coils six or eight inches in length. The right wrist is less deformed; it presents more carpus than the left, the bones being firmly anchylosed and considerably enlarged; but the metacarpus is much shortened, and nearly all the phalanges have disappeared, so that the stumpy fingers hang loose like rope ends.



The accompanying illustrations, drawn by Dr. Matzinger, will give a better idea of the singular deformity of the wrists than can be conveyed by words. The hips, knees and ankles are absolutely rigid; the shafts of the bones could be broken much easier than could the joints. The right ankle and tarsus are much enlarged, the left is near the natural size.



The toes of both feet are strongly over-extended; the right great toe is in an exaggerated position of hallux valgus, and the other toes are nearly parallel with it. The left toes are less deformed, but more extended.

So rigid is his body that with a hand under his head he can be "up ended" as one would prop up a board on one end by raising the other. Some of the costo-vertebral joints seem yet to be spared, since he has slight motion of the thorax. Still his respiration is mainly diaphragmatic.

His muscular athrophy is extreme; only slight flabby masses denote where muscles have previously existed. Tactile sensibility is good all over the body. His mind is active and intelligent.

Such is a brief pen-picture of this remarkable and lamentable case, which may well arouse both interest and sympathy in equal degree.

It certainly is not myositis ossificans, since in no place in his body are to be found those masses of new-formed bone so characteristic of the disease. It is evidently then a case either of rheumatoid arthritis, or one of Charcot's disease. For the former speaks especially the family history of rheumatism. I am well aware of the belief entertained by a few that between the two affections just named there is no essential difference: still I cannot accept this view, but hold there is between them a distinction based on early pathological changes, and on later clinical evidence. In the case in hand the history is not as succinct as could be desired, but a long time has elapsed; and to reason necessarily from a rheumatic family history to a rheumatoid anthritis would be illogical.

One can find more points in his case to indicate early ataxic changes than to exclude them. The severe pain he suffered for many years certainly speaks loudly for ataxia. The special features which characterize Charcot's disease are the disappearance of bone material, *i. e.*, its absorption—seen in his case especially about the wrists and hips; the occurrence of irregular displacements or dislocations, seen in his case in the carpal and metatarso-phalangeal articulations; and the history of sudden swelling of the joints, abundant effusion, fulminating pain, steady progress, and implication of one joint after another.

To be sure it is rare for so many joints to be affected in either disease, still that is no insuperable objection to a diagnosis of either form.

One other case comparable with this in extent has come under my notice. It occurred in the person of a young women who was twice under my care, for some months each time, in the General Hospital. I twice presented her in my surgical clinic two years ago, when I anæsthetized her and was able to make considerable improvement in the position of her deformed wrists and in rectifying certain other malpositions, by which I temporarily improved her condition, and made her more able to care for herself, and yet without conspicuous lasting improvement. Her knees were mobile, but her hips were rigidly anchylosed. Her wrists and hands were greatly deformed, and motion in the elbows and shoulders was extremely limited. Her history was quite similar to his, and the cases had several common features.

Remembering then that the name Charcot's disease simply implies the peculiar arthropathy which is met with in certain cases of ataxic disease, and that the joint changes are but local expressions of certain changes in the spinal cord, I feel no hesitation in concluding that the patient whose condition I have attempted to briefly describe above presents as remarkable an example of this affection as can be imagined, and certainly one more extensive than is mentioned in any of the literature on the subject which I have seen.

CELL LIFE.

BY JULIUS POHLMAN, M. D.,
Professor of Physiology, Med. Dept., University of Buffalo.

While demonstrations of the anatomy of cells are simple enough for the skilled microscopist, an attempt to treat cell life requires not only the aid of the microscope but also that of the biologist and the chemist. We can hunt and dredge for our studies the numberless forms of protozoa and sponges, and examine them alive on our object glasses; we can watch their motions and circulation, we can see how injurious substances added to the water surrounding them will cause their death, slowly or rapidly; in fact, we can examine all these phenomena of life again and again and yet remain ignorant of the life itself that exhibits itself before us in the cells under our microscope. An attempt to explain cell life must penetrate down to the very starting-point of biology, and before venturing upon theories, let us hurriedly look over the ground before us.

Commencing with the simplest structureless cell, a mere little jelly-like speck of protoplasm, we pass upward in the scale of life and find cells that have a surrounding protective covering, a cell wall, and a nucleus; perhaps a nucleus again inside of the nucleus. We notice cells of the greatest variety of form, and this variety is evidently limited only by the variety of their functions; and every cell, simple or differentiated, plant or animal, contains protoplasm, an albuminoid substance which has so far defied the analytical skill of the chemist.

The simplest cell has no specialized function to perform; the whole acts and thinks and feeds as a whole for the whole, and here we find a speck of structureless protoplasm only; as soon, however, as cells combine into organisms, whether plant or animal, the needs of the whole necessitate a division of labor, and calls for special functions of different parts; and certain numbers of cells adapt themselves to the economical performance of their share of the work necessary for the existence of the whole organism. While some are specialized into forming a simple protective covering of the skin, hairs, or nails, others form the most delicate little laboratories where substances of the most complex nature are prepared, and where these apparently simple cells elaborate synthetically products which defy the skill of our best chemists. When we remember that chemistry of to-day, while it can change starch into glucose, is unable to make starch from glucose, a chemically speaking simple and definite compound, and when we contrast that with the variety and complexity of the substances elaborated, for instance, by cells of our own body, we can form an idea as to the very small amount of chemical knowledge the world really possesses to-day as compared with that of which we know nothing; and we may well gaze upon the works of simple cells and admire the wonderful adjustment in their relation to each other, as well as in their relation to the organism as a whole. Let us pause for a moment and think how different cells of the same body prepare fluids for alkaline, acid or neutral reaction, fluids varying from a watery to a jelly-like consistency. Recall to your minds the fact that every cell in your body, from those of the finger-nail to those of the brain, perform their share of the functions necessary for the existence of the body as a whole, and remember then that man as a so-called intelligent being is absolutely ignorant of all but a very few of all these processes, and you will then understand that a study of cell life will make the student feel his own insignificancy all the deeper the more he is able to admire the wonderful complexity of the function of cells in their different forms.

We all know, for instance, that plants decompose the CO_2 of the atmosphere and combine the carbon so contained with water, sent inward by the roots, into starches and sugars, while by other combinations with the nitrogen, sulphur, phosphorus, etc., of the soil they produce a variety of nitrogenous substances; but we seldom consider that this is the work of cells of the same plant which has relegated the formation of hairs, thorns, bark, hard shells for nuts, wings for the seeds, food for the embryo, etc., etc., to other members of cells, all of which depend for their structure and functions upon the needs and wants of the plants, as a whole, entailed upon it by its environments.

And when we have studied cell life, whether plant or animal, sufficiently deep to understand the extent of our own ignorance; when we have seen that the all-pervading law of nature dictates that the environments determine the formation as well as the specialization of the organism, while the use of the different parts of the organism determine the strength and structure of the organs; when we have surveyed the ground before us intelligently from all sides and with an unbiased mind, we are obliged to ask ourselves whence comes this wonderful power of adaptation? What enables the cell to change its structure and to differentiate into so many forms and functions, whenever the conditions under which it finds itself necessitate such a modification? What enables the white blood corpuscle to repair tissue, what the red corpuscle to combine with oxygen in such a way that it can be liberated again at a moment's notice? What makes birds and mammals of the temperate zone develop a thicker coat of feathers or fur on the approach of the cold season to be shed again in the spring? What enables hairless hot climate animals to grow a coat of hair when they are obliged to live in colder regions? Even if plants and animals had by some unexplained *chance* acquired certain properties apparently conducive to their well-being, how did they find out, how could they *know* that such peculiarities were the best? Did the caterpillar and butterfly resort to mimicry by accident? Does the polar bear *know* that white is the warmest color for the arctic region? Do we ever find a display of *chance* in nature, or does anybody deny that this universe is governed by Law?

All scientific speculations, theories and facts start with the existence of matter and force, both indestructible and united in an inseparable union, and which the human mind cannot grasp apart from each other. Chemists have now subdivided matter into about 70 different elements, but we are as yet totally ignorant about matter itself; for neither the most delicate chemical tests nor the most powerful microscopes can tell us anything about the ultimate atom or molecule. The force inherent to matter has, as a rule, been accepted as sufficient to account for all the changes that matter has undergone or is undergoing now, and physicists have transformed this force into sound, heat, light, electricity and back again, but in all these differing conditions it has remained "vibration" of some form, and nothing else. When we analyze the theory of matter and force carefully we must admit that something is wanting. Force acting upon matter is, so far as our understanding will reach, merely *mechanical*, so to speak, and will never explain the wonderful intelligence displayed in the arrangement of matter. Sound, heat, light or electricity will never produce consciousness, and any attempt to differentiate it by some unknown means from simple force must fail, because we can never hope to demonstrate this transformation; we cannot even imagine how such a change could have taken place.

Twist and turn as you please, mere matter and force will not explain to us why a plant standing in our window turns toward the sunlight while the roots grow toward the water. What enables the numberless organisms to adapt themselves to their surroundings, producing thereby the vast numbers of varieties, species and genera? Certainly not simple matter and force! What repairs the injured structures in the animal body, and by what means is each cell of the human body enabled to select from the blood just such substances as they need, when bone, muscle, nerves, skin, hair, etc., all require different substances, or at least varying quantities? It is very simple to talk about natural selection and the survival of the fittest, but that does not commence at the starting-point: from whence did plants and animals obtain the ability, the discerning power, to select the fittest for the perpetuation of their particular kind? Does mere matter and force explain it? Most decidedly no! Matter and force engulf us in a dilemma from which we cannot extricate ourselves unless we admit of a consciousness somewhere; a consciousness which feels and appreciates the varying conditions of the environments, and not only permits but forces the organism to undergo such changes as are necessary for its existence, and if unable to accomplish the needed modifications, causes it to break up into simple forms capable of existence in the new environments. Such a consciousness is not mere force residing in matter, not a mere differentiation of motion, but is the *director* of that force, the guiding power which regulates and enforces the transformation; and the visible changes of matter, its adaption to existing environments, are the result of this action.

[TO BE CONTINUED.]

VICARIOUS MENSTRUATION.—A woman in the clinic of Dr. Buman, of Freiburg (Switzerland), was suffering from a carbuncle which had made its appearance on the lower abdomen. The necrosed tissue was removed about the time the patient should have menstruated. The menstruation did not appear in the usual manner, however, but in the shape of an abundant hæmorrhage from the solution of continuity caused by the carbuncle. The hæmorrhage lasted three days and subsided without further phenomena.

In the psychological section of the British Medical Association Mr. J. R. Gasquet delivered the opening address, in the course of which he said: "There is one subject which, as it seems to me, we all alike neglect, and to which I may without presumption direct your attention, as well as my own. I propose to ask whether the abundance and importance of the bodily conditions that come before us do not unduly distract our minds from the mental and moral phenomena of insanity? Whether we do not look too much upon the physical side of the object of our study, and neglect its psychical aspect? Let no one be alarmed. I have not the slightest wish to disturb our tacit agreement that questions of philosophy should be set aside by us, and that our business is to study the concrete manifestations of mind. Nay, I am quite prepared, with a physician who was also a great philosopher (Lotze, Logic, chap. v.), 'by one general formula of ready worship, to purchase a dispensation from any further glorification' of the principle that insanity is due to disease of bodily organism, and must be studied as such. No doubt there has been much need in the past of the frequent repetition of this fundamental truth; still 'any moral sermon becomes intolerable if it goes on forever.' Nor does there seem to be much present risk of its being forgotten; while there is, on the contrary, the danger of a reaction if we dwell too unduly upon the bodily side of our duty. The zigzag progress of human thought may at the next turn of the path bring the psychical aspect into undue prominence."

"Yes, sir," remarked Mr. Roundtrip, "I am a poor man, and the only fortune I can give my children is an education, and that they have. Edward is entitled to write D. D. after his name, Alfred and Clara each write M. A. after theirs, and little Timothy is an A. B. All my children are university bred." "Is it possible?" exclaimed the new minister, looking at the children in amazement. "Yes, indeed," replied the father, proudly. "Harvard, Mr. Roundtrip?" suggested the new minister. "No," said the father, "they took the four-weeks course at Chautauqua.—*Burdette.*

Another Epitaph.—On the tomb of an *old maid* who died of a sore on her leg:

"Here lies the body of Dorothy Peg,
Who never had issue except in her leg."

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LUPUS AND EPITHELIOMA.

As is well known, these two diseases are in many ways so similar that they are apt to be confused. But histologically they are so different that when their minute differences are understood they are easier of clinical recognition. Epithelioma consists of a down growth of the epithelial elements of the cutis vera into the deeper cuticular layers, and later into the subcutaneous tissues. When this excess of epithelial development takes place on the surface of the skin it constitutes an ordinary wart, but when downward into its depths then it causes epithelioma. It begins in a measure innocently, usually as result of some local irritation, and it is only when cell proliferation takes place with unusual rapidity, and nutrition is impaired or prevented, that the breaking down process begins, and we have an ulcer formed. The firm, thickened border of the malignant ulcer speaks for the cell infiltration and extension, while the fact that it is an ulcer implies that the cells—on account of their multiplied number—have been starved to death.

Two other elements figure in the progress of epitheliomatous ulcers ; first, the exposure of their surface to the action of various bacteria of putrefaction by which the disintegrating process is still further hastened ; and second, that which Rokitansky aptly termed "epithelial infection." By this term he meant to imply the peculiar vital impression which a diseased epithelial cell seems to stamp upon the other cells with which it comes in contact ; the previously healthy cells seem to suffer, as it were, the deleterous effects of an evil association.

That the epithelial growth later manifests all the other characteristics of malignant neoplasms, while not to be for an instant overlooked, has but little bearing upon our present discussion, since in these respects it differs but little from lupus.

Lupus, on the other hand, is an ulceration of the integument or mucous membrane, due to a certain specific influence, and that influence, in the great majority of cases if not in all, is the same organism which causes such extensive internal ravages, the bacillus tuberculosis. This at least is the view held by many,—which has been in many instances proved, and which is constantly gaining in acceptance. Anatomically it consists of an invasion of the skin by the bacilli, consequent necrosis, just as in the lungs, followed by an effort to heal or to cicatrize in those parts first ravaged. This furnishes an important feature which may aid in differential diagnosis. No islands of cicatricial tissue are ever seen in the ulcerated epithelioma, while they may be conspicuous in the lupus ulcer.

The view that lupus is a tuberculous ulcer is based both on clinical and microscopic evidence. For the writer, for instance, it has been repeatedly possible to find tubercle bacilli in the scrapings from lupus sores; while the same have been found by numerous other and previous observers. The following case from the writer's experience will also show how clinical proof may be forthcoming, the case being as illustrative and important, in his estimation, as several that have become classical.

A middle aged woman, of healthy antecedents, wife of a country farmer, was brought for examination, presenting extensive ulceration in the naso-pharynx and about the nostrils, along with a number of acneiform pustules about the nose. A diagnosis of lupus was made, and after prolonged treatment the ulcers healed and only cicatrices marked their former site. A number of months later the same patient returned with a bone abscess in the head of the tibia, which was cut down upon, and scraped out; the whole ostitic trouble being unmistakably tubercular. If this case, so briefly alluded to, does not speak for multiple tuberculous foci it is hard to tell what lesson is to be drawn from it.

The chief diagnostic differences between lupus and epithelioma may be best set forth, for comparison, in some such table as the following :

LUPUS.	EPITHELIOMA.
A disease of early or middle life. Not dependant on local irritation.	A disease of middle or advanced age. Usually results from a local irritant.
Begins as a discolored macule, which then becomes a papule, or a nodule, and ulcerates.	Begins either as a nodule or wart, which ulcerates later, or is, when first seen, an ulcer.
As a rule makes rapid progress.	Progress rather slow.
Ulcer may be serpiginous.	Less likely to be so irregular.
Base usually covered with yellowish or brownish scab. When this is lifted up a pretty even base of fine granulations is exposed. These bleed easily. No deep seated induration.	Crusts less common. The ulcer surface is often villous or papillated. By pressure more or less debris may be forced out, often in worm-like form. Granulations are less even than those of lupus, and do not bleed as easily. Deep seated induration.
The border of the ulcer is not hard and firm.	The border of the ulcer is hard and firm.
Around the border the fresh lupus nodules (by whose degeneration the ulcer is formed) may be seen and felt.	No such nodular arrangement ; induration and marked thickening are conspicuous features.
The ulcer is not crateriform.	The ulcer has well marked everted edges, and is let in below the surrounding surface.
While ulceration is proceeding marginally cicatrization may be going on near the center in one or several localities.	Manifests little or no tendency toward cicatricial formation.
Less likely to affect neighboring lymphatics.	More likely to affect neighboring lymphatics.
Ulceration apt to take place in numerous nodules at once.	Ulceration proceeds from a single point.
Will cause more destruction of tissue in a given time.	Will cause less destruction of tissue in a given time.
Less painful.	More painful.
The principal histological elements are lupus granulations, indistinguishable by themselves, from those of syphilis, or from young granulation tissue.	The principal histological picture is of epithelial new formation, infiltration of lymphoid cells, alveolar arrangement of cells, and of the so-called pearly bodies.
Family history of tuberculosis ?	Family history of cancer ?

Ordinarily it is not difficult to make a diagnosis. We will only dwell upon the subject long enough to mention that while lupoid degeneration of epithelioma is probably unknown, the reverse is well known, and the formation of an epithelioma upon a lupus base has received a good deal of attention. It is in most respects similar to the development of epithelial cancer upon a chronic ulcer, which our boyhood teachers said was unknown, but of which we have nevertheless seen repeated examples.

In the *Annales de Dermat. et Syphilis* Raymond has recently written at length on this subject. The transition sometimes takes place by the intermediation of the cicatrices which frequently stud the lupoid ulcer, where probably epithelial elements still remain; or sometimes is a direct one, usually at the periphery. In these cases we must, with Vidal, regard the lupus lesion as a locus minoris resistentæ, upon which senile or hereditary (usually) influences have been at work. In a sore which one has long watched such a transition may be observed; otherwise the matter will have to be decided by a careful study both of the case and its history. Distinctions aside, treatment is based on the same principle in either case, and comprises extirpation of all diseased *and suspicious* tissue, either by caustics, the currette, or by exsection.

HONORS TO DR. LUCIEN HOWE.

The last census shows that while the population from 1870 to 1880 had increased at the rate of about 30 per cent., during the same time blindness had increased over 140 per cent. Moreover, an examination of the cause of eye disease in this country, shows that here, as elsewhere, a very large proportion is due to contagion.

At the last meeting of the New York State Medical Society a committee was appointed to investigate the causes of the increase of blindness in this country. The American Opthalmological Society has also appointed a committee for the same purpose, and of both of these Committees Professor Lucien Howe, of this city, has been made chairman. By resolution of the State Board of Charities he has also been asked for a special report on the subject in its relation to pauperism. In order, therefore, to study the more dangerous forms of conjunctival trouble it was deemed advisable by the Committee to pursue the investigations in the countries where they were most prevalent, especially in certain portions of Asia and Egypt—the latter country above all others offering an excellent field of study. At the request of the President of the American Opthalmological Society, the President of the New York State Medical

Society, Dr. Wier Mitchell, and others, he has been given special letters by the Secretary of State to our Ministers and to the diplomatic corps in Germany, Italy, Egypt and throughout the East, so that being officially accredited, every possible opportunity for observation would be afforded. It is proposed to study the causes of conjunctival diseases in the light of more recent bacteriological investigations, and for this purpose he will take with him the necessary apparatus, including two or three hundred culture tubes prepared with various media.

Dr. Howe expects to start early in December. The entire study will probably be continued over two or three years, although it is possible that he will return next summer in order to begin work at the data which have been collected.

We only wish that all other members of the profession in Buffalo were as progressive in their respective lines as Dr. Howe has shown himself to be in his specialty. We shall look forward to important results to be achieved by this investigation.

Dr. George Harrison died at the City Hospital, Rochester, on the 27th of September, 1887.

Dr. Harrison was born in May, 1863, and graduated at the University of Buffalo, last spring. He made a brilliant record while in college, standing second in a class of fifty.

On the first of April, this year, he was appointed junior house physician in the Rochester City Hospital, and from that time until within a few days of his death performed the duties of that position with honor to himself and to the eminent satisfaction of the hospital authorities. The disease which caused his death was peritonitis, and resulted fatally after an illness of less than a week.

Upon the death of Dr. Harrison, the medical staff of the hospital held a special meeting, and adopted the following resolutions:

Resolved, That the services of the deceased, though brief, manifested an intelligence and a fidelity to duty that earned the unqualified approval of the Staff. Modest in demeanor, earnest in endeavor and efficient in service, he "acted well his part." The early and abrupt ending of such a record has caused a feeling of sad disappointment and profound sorrow.

Resolved, That these sentiments have a separate page allotted them in the record of Staff proceedings, and that the Secretary be instructed to convey the heartfelt sympathy of the Staff members to mourning relatives.

THE discussion of typhoid fever in Utica, in which one hundred cases have been reported, brings out the significant fact that every case, so far as could be ascertained, occurred in drinkers of well-water. Filtrations from badly laid sewers and from garbage-strewn streets seem to contribute to the result. The physicians who discussed the subject spoke with feeling regarding the badly kept streets, and it will no doubt have its proper effect upon the city authorities.

⁂

DR. S. Falk, formerly with Dr. Knapp, of New York, has opened an office at 159 Franklin street, where he proposes to devote himself exclusively to diseases of the eye and ear.

⁂

AMONG recent appointments are those of Dr. J. H. Pryor to be Assistant to the Chair of Materia Medica and Therapeutics in the Buffalo Medical College; Drs. J. H. Bingham and DeLancey Rochester to be Post-Mortem Examiners.

⁂

THE *Annals of Gynæcology* is the title of a new journal just started by Dr. E. W. Cushing, of Boston, with the assistance of eminent talent in New York and elsewhere. The first number, now before us, comprises forty-eight pages and several extra pages of illustrations by one of the photographic processes. It certainly bids fair to be an entertaining and valuable journal, in spite of the somewhat peculiar way in which its publishers propose to gain subscribers. We shall welcome it to our exchange table.

⁂

WE learn that with the new year Messrs. Lea Bros. & Co. propose to issue the *International* (*American*) *Journal of the Medical Sciences* as a monthly, instead of quarterly as heretofore. Its well-earned reputation of being the best general medical journal in the world will be doubtless enhanced by this change.

Correspondence.

GERMAN HEALTH RESORTS.

WIESBADEN, September 15, 1887.

My last letter from Kreutznach was so general in its character, I did not even mention the Kreutznach waters and their medicinal effects. I was especially interested there from the fact that it has been claimed that these (Kreutznach) waters were able to disperse fibroid tumors of the uterus as well as to cure glandular and cutaneous affections. I have personally known and have been reliably informed of many cases of pelvic inflammations and a few of uterine fibroids, the former permanently relieved and the latter greatly benefited by the cure, and was more anxious to learn of the methods and results than of those of any other resort. It is probably true that the Germans are more conservative than either the Americans or the English in the manner of treating pelvic inflammations and tumors of various kinds.

It is asserted pretty generally in Germany that the laparotomies reported from England, and recently from America also, cannot be necessary, and that, at least outside those districts in which gonorrhœal infection of the tubes is very common, it is not possible to justify the numerous spayings reported. The tendency, therefore, of investigations in this direction is towards other methods of management, especially of fibroids, than the method by operation. I believe, too, that in America the tendency of investigation will be away from operative procedure during the next decade, and towards safer and more conservative methods of dealing with pelvic inflammations and their results.

Certainly one of the most vexed questions of to-day is the management of fibroid tumors.

Apostoli's method of dispersion by galvanism is not so favorably received here, perhaps, as in England or America, and yet I have heard much said in its favor. From the standpoint of the pathologists Apostoli's theories are correct and promise very brilliant results. The clinical facts are not as yet abundant enough to enable one to estimate results. In my own cases, not more than six or seven, I have been very much pleased with Apostoli's method and encouraged to give it further trial. I found, however, at Trouvé's and Gaaf's, the two leading electrical instrument makers in Paris, only one set of his apparatus, and I had to wait for part of this to be completed for me; and I think, therefore, the method is not in general use even in Paris.

At Kreutznach the theory of the absorption of fibroids is chiefly based upon the presence of bromide and iodide of magnesium in the waters.

The Elizabeth spring furnishes the water for internal use.

In contains in 10,000 parts:

	Parts.
Chloride of sodium	94.900
" of calcium	17.435
" of magnesium	5.314
" of potassium	0.812
" of lithium	0.798
Bromide of magnesium	0.375
Iodide of magnesium	0.045
Carbonate of calcium	2.201
" of barium	0.022
Magnesia	0.139
Oxide of iron	0.200
Phosphate of aluminum	0.034
Silica	1.680
	123.955

It will be seen from this analysis that there is but little iodine or bromine, and that the results must be attained, if at all, by other means than the internal use of the waters. The maximum daily administration of a pint and a half of the water continued for fifty days would not disperse much of a tumor. Two courses are advised during one summer, each to consist of not less than thirty baths. Much importance is attached to the baths, the hot douchings and to the compresses all medicated with mutterlauge.

This mutterlauge is the residual liquor that remains in the evaporating pans after the crystalized salt has been removed. It smells like seaweed, and it is exceedingly bitter to the taste and almost caustic. It is about one-third heavier than water. This liquid is added to the ordinary bath in such proportion that the skin shall not be too much inflamed, but yet thoroughly stimulated. The compresses or the baths, if too strong, bring out a very ugly papular or even pustular eruption. The bath-tubs are of wood and the baths are heated by steam. The strength and the temperature of the bath is directed and varied by the physician who prescribes them, according to the strength and susceptibility of the patient. At first they may be taken only twice a week, but, later, every day. There is not much doubt but that of themselves the baths are depressing, and only for the out-of-doors exercise and the invigorating air of the region few would bear them. A much more liberal diet, too, is permitted at Kreutznach. In all cases, then, of fibroids of the uterus, whether bleeding or not, as well as chronic metritis and cellulitis, the baths and the compresses of mutterlauge, and the internal use of the Elizabeth spring waters, constitute the treatment which is certainly beneficial in a large number of cases, if one can judge by the reports of the physicians and the evidence given by patients. Unfortunately there are no available statistics. In all lymphatic swellings and in chronic eczema the cure is very satisfactory.

When one asks if the same results can not be obtained at home, I answer very decidedly, no. Not but that any one of the measures employed here may be used elsewhere, but the combination here of the out-of-doors life, the necessary exercise, the simple food, the pure and invigorating air, together with the waters, is a rare one. There has been an enormous outlay of money in fitting the garden and promenade and trinkhalle, and in securing excellent music for the three daily promenades, and to hear which one must get up early and must be in the open air for several hours each day. From twelve to fifteen thousand patients visit Kreutznach every year. The fee received by the doctor is strictly an honorarium, and its size depends on the social condition of the patient, and is always, "What you please, sir."

It is as well understood as the system of fees everywhere, however, that ten marks will do for certain patients, but twenty marks is expected of others.

This high moral standpoint is very dignified; but would hardly do for our country, where more business-like methods prevail.

Here at Wiesbaden also the waters are alkaline, having the chloride salts and a trace of iodine and bromine, and are also thermal. The reputation of the place for the cure of rheumatism has been sustained many years, though the modern elegant and luxurious methods of application have come in vogue during the past thirty years. The waters are not strong to the taste and are sufficiently charged naturally with carbonic acid gas to be agreeable to take, and in the baths to leave a quieting effect upon the patient. The surroundings here are beautiful, and the town itself has wide streets, handsome villas, and a general air of prosperity rarely seen. Here the grape cure and the milk cure are also found, but of these I have not space to write.

One is more and more impressed with the fact that the intelligent use of hydrotherapy is exceedingly valuable in many chronic ailments, and that this branch of legitimate medicines is too little appreciated at home. In America, as everywhere in England, the hydropathic establishments are not under the direction of the best men, and from the German methods we still have much to learn. No one, I think, doubts but that America possesses all the natural advantages in mineral waters that can be found elsewhere, but they are still undeveloped. The American Climatological Association, which has already collected and formulated many hitherto isolated facts regarding not only the climate, but also the mineral waters of our country, is doing a work which will ultimately be of great service to our whole profession. I have no doubt but that when American health resorts come to that state of development which is now reached by German spas, we will not only care for our sick at home, but will also attract thousands from Europe, as now the German health resorts attract thousands from America. F.

Society Proceedings.

UTICA MEDICAL LIBRARY ASSOCIATION.

Annual Meeting, 1887.

Reported by Dr. Jno. P. Gray, Secretary.

The following officers were elected for the ensuing year: President, Dr. W. H. Booth; Vice-President, W. B. Palmer; Treasurer, J. D. Jones; Secretary and Librarian, J. P. Gray. The subject, "Well Water, and its Relation to Typhoid in Utica," was brought up for discussion.

Dr. Gibson said that as a member of the Health Board he was much interested in this subject. The past winter had been a long one — the warm weather not beginning until the middle of May — when it came on very suddenly. In addition to this the rain-fall had been much below the average. The geological formation in this section was as follows: At a depth of from 15 to 35 feet was the bed rock, composed of a strata of slate and shale, above this is a stratum of blue clay, and over all a filter composed of gravel and sand. The blue clay is impervious to water and in it are many depressions or pockets, which are filled with impure water coming from the filter above, which has been saturated with animal matter from the privies and cesspools. This water eventually finds its way into the adjacent wells, making their water unfit for use. The Board of Health have never insisted on the proper drainage of privies, and the sewers are made of hydraulic cement and are very leaky. In taking up the old sewer on Havort street every other length was perforated. Typhoid is on the increase in Havort street, and through the city it has increased 100%. On Hart street he analyzed the water and found it to contain 40% of chlorides, which means 40% of urine. People must understand that here in Utica it is impossible for wells long to remain pure. The discharges in typhoid fever cases are thrown into the leaky sewers and thence find their way sooner or later into the wells in the vicinity. The main objection to closing the wells is the high rate for city water. In all cases of typhoid reported well-water has been used.

Dr. Quin thought that the people should be informed through the press of the true state of affairs, and that their only safety lay in boiling the water.

Dr. Booth—The Board of Health can close all the wells if necessary.

Dr. Gibson—That would hardly seem right, especially as we have no guarantee that the city water will be kept pure. One case of typhoid on Frankfort Hill might poison the city.

Dr. Jones thought there was no epidemic at present.

Dr. Ford—Under proper sanitary conditions there should be no cases of typhoid in the city.

Dr. Gibson—Vienna was formerly subject to typhoid, but since it has had a water supply from the mountains there have been no cases, although the population is 700,000.

Dr. Smith said that the plumbing should be looked after, as sewer gas was as dangerous as well-water.

Dr. Ford—I am glad to hear Dr. Gibson talk on this subject, and in this connection I want to say a word in regard to the filthy condition of our streets. The refuse from cellars and the slops from houses are universally thrown on unpaved streets and into the roadway. I never saw such a dirty city as this, and I do not believe there is another place on the face of the globe so badly managed in this respect. It is such a slight thing to stop garbage being thrown into the street that it is criminal in the authorities not to attend to it. In wet weather slop-holes are formed which act as hot-beds for the germs of disease. Many of the streets are torn up so that it is dangerous to ride through them, especially at night. The trouble seems to be that there is no money to put them in shape. I would gladly see the government steal half the money, if they would devote the remainder judiciously in putting the streets in order. Why, I would welcome a Boss Tweed who would spend at least half his stealings in putting the city in good condition.

Dr. Pilgrim said he had never seen worse streets even in the small towns of Italy where there was surface drainage.

Dr. Wagner thought with the existing geological formation the wells should be closed.

After a brief further discussion Dr. Quin offered the following:

WHEREAS, There are now in this city more than a hundred cases of typhoid fever, the majority of which can be traced to the use of well-water:

Resolved, That we caution the citizens of Utica against using well-water, and inform them that they do so at their own peril. We recommend that they use either city water or filtered rain-water.

Carried unanimously.

Having been handsomely entertained by Drs. Quin, Kilbourn, and Gibson the Society adjourned.

Selections.

Fracture of Thigh, Reabsorption of Callus on the Seventieth Day during an Attack of Erysipelas.—Dr. Ferret (Paris).—A youth, æt. 17, with a good previous history, sustained a fracture of the middle third of the thigh during the first week of February. Put up and extended with Tillaux's apparatus it got well without any shortening. When on April 6th consolidation was perfect and the patient was getting about, an attack of erysipelas came on, starting from a spot chafed by the diachylon plaster. It was very severe, and on the sixth day the limb was found bent almost to an angle of forty degrees, at the seat of fracture. The callus had all disappeared and there was complete mobility in every direction. The erysipelas was well on April 18th, but there was a deep pain in the situation of the fracture, and to this was added, on the 22d, both swelling and fluctuation. One hundred grammes of pus were let out by the aspirator. As a fresh accumulation took place, a large opening was made into an abscess cavity where the two ends of bone were found close together, the upper one completely denuded to the extent of four centimeters. Resection was performed, iodoform applied and the limb placed again in the apparatus. At the end of May the wound was healed, and the consolidation was once more perfect. This sort of case is very rare. The more frequent ones are those in which the callus slowly softens and disappears on account of a generally bad state of health. Out of three cases which Dr. Ferret has found reported, where it disappeared during an acute febrile disease, one only was properly examined, that of Schillings (*Med. Zeitung*). Here was also a fractured thigh in which, during the sixth week of typhoid fever, all the callus disappeared so entirely that no trace of it was afterwards to be found at the post-mortem examination. Dr. Ferret believes that when, during the course of typhoid or of an eruptive fever, the callus thus disappears, the bone must be attacked by an inflammation of an infectious nature (*osteite infectueuse*) which sometimes accompanies those illnesses, and for which the recently formed callus presents a suitable soil.—*Le Progres Medical, Nov., 1886.—Annals of Surgery.*

APPEARANCES IN ACUTE PNEUMONIA.—At a recent meeting of the Paris Academy of Sciences, Dr. Jaccoud read a paper on "Certain Appearances in Acute Pneumonia." M. Jaccoud had set himself to examine whether, as was generally believed, it was true (1) that cold was not a sufficient cause of pneumonia ; and (2) whether the microbes which characterize this affection, and which appear in the blood and in the saliva, could exist only in consequence of a special condition of the tissues and organs contemporaneous with the immediate effect of cold. After explaining cases of the disease which had fallen under his own observation, M. Jaccoud concluded that cold alone had sufficed to determine pneumonia in them all. The chill brought about an organic change, which turned the microbes already existent into morbid agents. The microbe characteristic of pneumonia was known to exist in an inoffensive condition in the normal saliva, and its malignancy was directly traceable to the effect of chill. It was permissible to affirm, urged M. Jaccoud, that pneumonia resulted from mere chill, and that the microbe characteristic of this disorder was not communicated to the frame from the outside atmosphere, but was an intensified form of that which existed in the saliva in a state of health.—*Pacific Record.*

PROPAGATION OF MEASLES BY HEALTHY PERSONS.—From an editorial of *Le Concours Medical*, the *Therapeutic Gazette* abstracts the following observations : The possibility of carrying the contagious principle of measles from place to place by the medium of the body of healthy persons was recently discussed by the Medical Society of Berlin, and one gentleman, Joel, of Lausanne, presented certain facts which led to the belief that such a possibility does exist, and that the medium is often furnished by the physicians themselves. One case which was cited was that of a boy who was brought from Geneva to Lausanne while he was passing through the incubation stage of measles. The butcher and the postman who served the institution to which the boy was brought conveyed the disease to their children, who were attacked with it in a short space of time, and, what is quite remarkable, the children in almost every house to which the postman delivered letters were attacked. A little girl was brought to a hospital, and in a few days had undoubted symptoms of measles. Her father had paid her several visits before the measles appeared, and it was ascertained that two of his children were suffering at home from the disease. Eight other children in the hospital were quickly seized with it. It is thought that physicians cannot always avoid carrying the contagion with them, even when extraordinary care is taken. Prophylactic means on the part of the physician should be as thorough as possible, however, by disinfection, change of garments, and all other available procedures.—*Arch. of Gynecol.*

REMARKS ON THE PREPARATION OF ANTISEPTIC BICHLORIDE SOLUTIONS.—By Prof. O. Angerer (Munich).—Solutions of bichloride in ordinary water suffer a partial decomposition after a time, some of the mercury precipitating in the form of superchloride. This is somewhat influenced by light, warmth and air. Fürbringer last year found that 80% of the bichloride was thus separated in water of Jena. At Munich it amounts to 50%. This depends on the hardness of the water. Fürbringer found that various acids by breaking up the carbonates prevented this precipitation. The apothecary, Schillinger, of Munich, found that by adding an equal weight of common salt to any quantity of sublimate such precipitation after solution could also be avoided. Finally, Emmerich, of Munich, has experimented with this combination in very weak solutions (1:50,000) and compared the degree of asepsis achieved, with that from equally dilute solutions of simple bichloride. He finds the disinfecting power of the salt bichloride mixture quite equal to that of the bichloride alone. The mixture can be made into tablets, and is thus more readily soluble than sublimate alone—from the ready solubility of the salt.—*Centbl. f. Chirg., 1887, No. 7.—Annals of Surgery.*

THE STENOCARPINE SENSATION.—Our readers are doubtless familiar with the reports of Drs. J. H. Clairborne, Hermann Knapp and Edward Jackson, concerning the so-called new local anæsthetic, Gleditschine or Stenocarpine, which were published in the *New York Medical Record*, July 30th, August 13th and October 1st; and *Philadelphia Medical News*, September 3rd; in which Gleditschine was claimed to possess anæsthetic and mydriatic properties.

It will, therefore, be of interest to them to learn that Messrs. Parke, Davis & Co. announce that an investigation at their laboratory, of a solution purporting to be a 2 per cent. solution of Gleditschine or Stenocarpine, which was supplied by Messrs. Lehn & Fink, of New York, has developed the fact that this solution, with which the experiments thus far recorded have been made, contains 6 per cent. of cocaine and a sulphate of a salt which further experiment is likely to prove to be atropia.

F. A. Thompson, Ph. C., also reports, after careful experiment with the leaves of Gleditschia triacanthos, from which Gleditschine or Stenocarpine is claimed to have been derived, that they contain only an infinitesimal percentage of an amorphous alkaloid devoid of anæsthetic or mydriatic properties.

In the light of these facts it seems probable that the Stenocarpine sensation should be classed with the Hopeine fraud of malodorous memory, and that the physicians who have already published reports regarding Gleditschine or Stenocarpine have been the victims of a clever hoax.

THE St. Louis *Medical and Surgical Journal* says: One who has ever witnessed the magical effect of a warm or hot water clyster in colics and griping pains of the bowels will never hesitate to resort to the remedy before trying anything else, when called to see a case of the sort. The water should be from 115° to 120° F., at the lowest, and is all the more efficient if ten degrees warmer, and for an adult at least a pint may be pumped into the rectum.

Doctor—What is the exact location of the pain which you complain of, William? Is it in the biceps, or the triceps, think you?

Student—No, sir; from the feel of it I suspect it must be in the *forceps*.

Book Reviews.

DIFFERENTIAL DIAGNOSIS: A MANUAL OF COMPARATIVE SEMCIOLOGY By F. deHaviland Hall, M. D. Third American Edition, edited by Frank Woodbury, M. D., pp. 255. Philadelphia, D. G. Brinton, 1887.

When Hall's work first appeared ten years ago it seemed to us the best book of its kind that could possibly be placed before American students. Its arrangements in tabular form were its most important feature, and these have still been preserved in the new edition. A great deal of new matter has been added by its talented editor, who has shown himself keenly alive to the needs of the student of the present day. Complete but concise directions are given for securing the aid of the microscope in recognition both of histological elements and of micro-organisms, in discharges, excretions and blood. Thus the reader is told just how bacilli may be recognized in sputa of consumption, or the spirilla in the blood of a patient sick with relapsing fever. The chapter on diseases of the nervous system is very full. The tabular comparison of the different forms of Bright's disease is, though brief, all the more admirable, and might be with advantage committed to memory.

Altogether the book is excellent, and we would advise every student and junior practitioner to become the possessor of a copy.

THE CURABILITY OF INSANITY, AND THE INDIVIDUALIZED TREATMENT OF THE INSANE. John S. Butler, M. D. New York and London: G. P. Putnam's Sons.

This is a little work of sixty pages, although it has a large title. The author in 1839 became Superintendent of the Lunatic Hospital in Boston, and in 1843 of the Retreat, at Hartford, Ct. His book is largely reminiscence of matters which were then debatable, but are now almost universally adopted. It is written in the kindest spirit, but hardly covers the questions suggested by the title.

W. D. G.

INSANITY: ITS CLASSIFICATION, DIAGNOSIS AND TREATMENT. A Manual for Students and Practitioners of Medicine. By E. C. Spitzka, M. D. Second Edition. Pp. 423. New York: E. B. Treat.

This edition, the second in four years, is not a mere reprint, for it has some changes and additions. Still it cannot be called a revised edition, and the owner of the first will not need the second. If one is buying a work on insanity he will do well to purchase this. It is, however, a book that requires study, for the author is not easily read, nor always quickly understood. On the other hand, it is worthy of study, and one will be repaid for all the time given to it. The criticism we should make is, that the book is rather too complicated for the ordinary student and doctor; rather too difficult to master, rather too complex in its classification, and not always sufficiently clear in description. If, however, one will faithfully study the book, and apply its teachings to his clinical experiences, he must advance in practical and theoretical knowledge of insanity. The student of Dr. Spitzka's book will do well if he masters the chapters on Delusions, Imperative Conceptions and Morbid Impulses, on Hallucinations and Illusions, Emotional Disturbances, Memory and Consciousness in Insanity, and Will in Insanity, and part third upon Insanity in its Practical Relations. He should also read with care his descriptions of clinical cases and of his forms and types. It would hardly be worth while to master his classification and endeavor to place every case one sees in one of its many divisions. The reader is cautioned, that while he studies, he must not religiously accept everything as the last and all that can be said upon these subjects. For if he should buy a second and then a third book on insanity, his faith would be rudely shaken, and he might easily become a skeptic, and think there is no truth in any of them. This is not so, for there is more truth in each than there is disagreement between them. Insanity is by no means an exact science, and authors are really students, although they are too apt to speak as with authority. Dr. Spitzka is imperative in his teaching and manner of expressing himself. He is positive, knows what he believes, and says it fairly and openly. It is for these reasons we commend the book. If studied as we have suggested, the student not only will learn something, but what is more important, will get something that will teach him to think for himself. W. D. G.

DIARRHŒA AND DYSENTERY. By A. M. Palmer, M. D. The Physician s Leisure Library, No. 3. Detroit: Geo. S. Davis, 1887.

Dr. Palmer has in this little brochure confined himself to giving in small compass the modern views of the pathology and treatment of these common diseases. We are pleased to see that the recent investigations into the chemistry of the peptones and the various alkaloids found in the intestinal canal have not escaped him, and that he accepts Bouchard's views in that he admits that most of the alkaloids which are found by the decomposition of albumen are intestinal irritants and tend to produce diarrhœa. To the subject of the recently named tyrotoxicon he devotes several pages. Without the actual experience of it which he ought to have enjoyed he still commends Beaumetz's carbon-bisulphide water,—a plan of treatment warmly indorsed by this journal in its editorial pages last year (p. 510). A good deal is said also of the ipecacuanha treatment of dysentery, which seems in many cases admirable. The author's favorite prescription, however, seems to be blue mass or calomel with morphine, followed by small doses of ipecacuanha and bismuth later. The monograph makes very pleasant reading, and is perhaps the best essay which its celebrated author has ever published.

BOOKS RECEIVED.

From J. H. Brinton, Philadelphia:
  Differential Diagnosis: F. DE H. HALL.

From G. P. Putnam's Sons, New York, through Peter Paul & Bro., Buffalo:
  Differential Diagnosis of Skin Diseases: C. W. CUTLER.

From Wm. Wood & Co., New York, through J. H. Matteson, Buffalo:
  Physical Diagnosis of Thoracic Diseases: E. DARWIN HUDSON, JR.
  Reference Handbook of the Medical Sciences, Vol. V.: A. H. BUCK.

From Geo. S. Davis, Detroit:
  The Physician's Call-book and Record.

From P. Blakiston & Co., Philadelphia, through Peter Paul & Bro.:
  Physician's Visiting List, 1888.

From D. Appleton & Co., New York, through Otto Ulbrich, Buffalo:
  Operative Surgery on the Cadaver: J. J. GARMANY.
  Functional Nervous Diseases: GEO. T. STEVENS.

From Lea Bro's & Co., Philadelphia:
  Human Physiology: H. C. CHAPMAN.

NOTICE.

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CARDIAC MURMURS.*

By Charles Cary, M. D.

Professor of Anatomy, Medical Department, University of Buffalo.

[*Concluded from the September Number.*]

MITRAL STENOSIS PRODUCING THE MITRAL DIRECT, PRESYSTOLIC, DIASTOLIC OR AURICULAR SYSTOLIC MURMUR.

Strange as it may seem, this disease is classed by some authors as being the rarest and by others the most common of all valvular deformities. Sir Andrew Clark published an article in the February number of the *British Medical Journal*, entitled, "Substance of Some Remarks Concerning Cases of Valvular Disease of the Heart, Known to have Existed over Five Years, without Causing Serious Symptoms." The object of his paper was to show that valvular disease was not necessarily a serious malady, and that insurance companies might well afford to issue short-termed policies to applicants suffering from valvular disease, particularly where none of the secondary conditions were manifested, or where the malady was stationary. I have classified six hundred and eighty of these cases, and present them here compared with my own and with the text of Dr. Loomis in Pepper's System of Medicine, and it will be seen in these lists that this murmur is very common.

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* Paper read before the Buffalo Medical Club.

MITRAL AND AORTIC MURMURS—THEIR RELATIVE FREQUENCY

IN 680 RECORDED CASES:			IN 100 RECORDED CASES:		
	No.	Pr. Ct.		No.	Pr. Ct.
Mitral regurgitant	279	.4103	Mitral regurgitant	31	31
Aortic direct	168	.2470	Mitral direct	15	15
Mitral regurgitant and aortic direct	77	.1132	Mitral regurgitant and aortic direct	11	11
Mitral direct	58	.0852	Aortic direct	10	10
Aortic regurgitant	28	.0412	Mitral double	8	08
Aortic double	25	.0368	Mitral double and aortic direct	6	06
Mitral double	16	.0235	Ventricular	6	06
Mitral regurgitant and aortic regurg.	10	.0147	Mitral regurgitant and aortic double.	5	05
Mitral direct and aortic direct	7	.0103	Aortic regurgitant	4	04
Mitral regurgitant and aortic double.	6	.0088	Mitral regurgitant and aortic regurg.,	1	01
Mitral direct and aortic regurgitant	3	.0044	Mitral direct and aortic double	1	01
Mitral double and aortic double	2	.0029	Ventricular and aortic regurgitant	1	01
Mitral direct and aortic double	1	.0014	Mitral double and aortic double	1	01
	680	.9997		100	100

(Loomis.) "The following is the order of relative frequency of cardiac murmurs: 1 mitral regurgitation, 2 aortic obstruction, 3 aortic regurgitation, 4 mitral obstruction. The most frequent combinations of murmurs are: 1 aortic obstruction and regurgitation, 2 mital obstruction and regurgitation, 3 mitral obstruction and tricuspid regurgitation, 4 aortic obstruction and mitral regurgitation, 5 double valvular disease at aortic and mitral orifices (four murmurs)."

My own are some of the cases that have come under my observation within the past fifteen months. I had thought to make the number much greater, but find that my clinical notes are not in all cases sufficiently accurate to enable me to utilize them in greater number, and I have further discarded all cases that could not be classified in accordance with the table in the first part of this article.

There has been a deal of controversy concerning the presystolic bruit, and while occupied with this subject I have read many contradictory statements by different writers. The discussion was at its height about 1862, when Durosiez referred to it as "*ce fameux bruit présystolique dont tout le monde a parlé, sur lequel personne ne s'entend, que Hope lui-même avoue n'avoir jamais entendu, que M. Bouillaud enfin neglige et même nie.*

On the other hand, as appearing against this strong statement, are arrayed most of the more recent authors, and judging from the list of Sir Andrew Clark's cases it is even more common than aortic regurgitation; but in this connection it must be borne in mind that his cases were selected as having one distinguishing character, which was the absence of marked subjective symptoms. It therefore is not a little surprising to me to find in his list so large a proportion of aortic regurgitant murmurs, which are generally esteemed grave lesions.

I have been particularly interested in the study of presystolic murmurs, and my attention was called to many of those cases by Dr. W. H. Katzenbach of New York, in the out-door department of Bellevue Hospital: it is perhaps for this reason that the number in my short list is in excess of what it perhaps would be in the general run of cases.

The murmur is undoubtedly very often overlooked and for two reasons: 1st. The character of the sound differs from the usual cardiac murmur; 2d. It occurs so near the first sound as to be regarded as a systolic murmur.

The character of the bruit is a loud blubbering, churning, harsh sound; rarely is it the common blowing murmur: preceding the first cardiac sound it lengthens it somewhat or even may convey to the auditor the impression of three heart sounds, the first one being accompanied by a distinct thrill.

The physical condition which produces the murmur when pictured to the mind throws considerable light upon the quality of sound to be expected; it is caused by the flapping of one or both curtains of the mitral valve in the blood current just as a flag flaps in a stiff breeze, and owing to the large size of the curtains as compared to the semilunar valves, the sound is much coarser and louder; it must also be borne in mind that the orifice is larger, the current of the blood is slower, and the power of the auricle less than the ventricle; its intensity is therefore much less than any systolic murmur.

The cause of the murmur lies in any deformity of the valve or of the auriculo-ventricular opening, or any condition which will admit of a vibration of one or more of the chordæ tendineæ of the mitral curtain. It would not be possible to describe at length the exact form or nature of these deformities, for they are exceedingly varied; sometimes the valve curtains are partially adherent to each other or to the ventricular wall, at others everted into the auricle, narrowing the auriculo-ventricular opening; again, the chordæ tendineæ may be shortened through contraction and calcareous thickening, or elongated, or ruptured; finally, the valves may be normal and cavities of the heart so altered as to change the relative size between valve and orifice, thus inducing either a systolic or diastolic murmur; a full discussion, then, of the varied conditions which may be found could not be described in this article.

The second error can be avoided by carefully noting the time of the occurrence of the murmur in the cardiac cycle; this can be better appreciated by referring to the chart in the first part of this paper. The bruit occurs during the auricular systole which immediately precedes the ventricular systole, and is abruptly stopped by the closing of the mitral valves, which produces the first sound of the heart; there is therefore little or no appreciable interval between the presystolic sound and the systole, which accounts for the common error of attaching this sound to the first cardiac sound.

Doctors Loomis and Fagge both state that "the mitral stenotic murmur does not often merge into the first sound of the heart, but is usually separated from it by a short interval"; this interval, however, is so short that it usually cannot be appreciated, and I am afraid that the able authorities quoted make this declaration by arguing from the cause, and with a perfect knowledge of how the murmur is produced; for certainly the interval which they recognize cannot be any longer than that period which intervenes between the cessation of the flow of blood through the auriculo-ventricular opening and the closing of the mitral valve; a period which can hardly be detected. When the interval is detected the heart sounds are three in number. There are other points of diagnostic value, the first in order being the *thrill.* The apex impulse is usually plainly seen and normally located; when, however, there is left hypertrophy its cause must be found elsewhere as a mitral stenosis cannot induce a left ventricular hypertrophy. The thrill is readily felt and precedes the apex impulse; it is justly called a purring thrill, and is due to the fluttering of the mitral curtains in the blood current, or to the tossing of blood as it is forced through the stenotic auriculo-ventricular orifice. It occurs also in the presystolic period; palpation therefore lends aid in recognizing this lesion more than in any other valvular disease, but the thrill must not be confounded with hepatic or epigastric pulsation. A real presystolic thrill is pathognomonic of this lesion. The accentuation of the second sound heard in the pulmonary area would indicate greater stenosis and resulting pulmonary vascular fullness. This exaggeration of pulmonary sound is at times very great, high in pitch and in marked contrast with the aortic sound, which is in nearly equal degree reduced in volume.

The subjective symptoms are often entirely wanting or present in such slight degree as not to attract the attention of the patient. When the obstruction is sufficient to yield secondary signs there will be bronchorrhœa, due to pulmonary engorgement, a cough easily excited by exertion, and frequently hæmoptysis due to the same cause; irregular pulse is, as a rule, not present unless the lesion be great enough to produce failure of the auricle when the pulse becomes small, weak and irregular.

One word more concerning this lesion which will further account for its being so frequently overlooked. Mitral stenosis and mitral insufficiency are generally associated, that is with mitral stenosis there is almost always some regurgitation; mitral regurgitation on the other hand may and often does exist alone, but the reverse is not the case, the physical cause which will induce a real obstruction is almost certain to produce some regurgitation; and this is easily accounted for by the great pressure on the left side of the heart which will be sure to find some leakage in a valve which is enough deformed to yield a direct obstruction. When the two are both present the regurgitant murmur veils the direct not only on account of its intensity but because of the close relation between them in point of time.

MITRAL REGURGITATION OR INSUFFICIENCY OR REFLUX.

When upon contraction of the left ventricle there is any deformity of the mitral valve or of the auriculo-ventricular opening which will allow of a leakage, however slight, then we have mitral insufficiency and generally its characteristic murmur.

The deformity of the valvular curtains is caused by the same endothelial conditions which have already been mentioned as the causation of other murmurs.

The murmur is systolic and heard at the apex. It is undoubtedly carried to this point directly through the heart's substance, and from there transmitted to the thoracic wall. The close approximation between the left heart and the left posterior thoracic wall causes this murmur to be transmitted along the ribs, particularly when provisional hypertrophy has taken place. Frequently on this account the murmur proper is heard with more distinctness in the middle axillary region where the muscular quality of the heart sound does not exist in the degree that it does at the apex to confuse the auditor. As a rule the murmur can therefore be detected at the apex, laterally to the left, and just below the scapula, accompanying the first sound. When heard only as an apical murmur it cannot be differentiated from a ventricular murmur.

The quality of the murmur is not constant, but is generally a blowing murmur of varying degrees of intensity, from a harsh, rattling murmur to one with musical quality of high pitch; in some cases the murmur is short, and again it occupies the entire first period of the cardiac cycle; in cases where it is heard at the close of the systole when it is induced by the expulsion of only the final contents of the ventricle, it is termed a *delayed or post-systolic* murmur. When the reflux is slight there may be as in all valvular disease no subjective symptoms; but when it is sufficient to make itself felt in the circulation, the symptoms are not unlike those of mitral stenosis; the ventricle contracting instead of driving all the blood into the aorta,' drives a certain amount, depending upon the degree of insufficiency of the valve, back into the auricle: this in its earlier stages, or until left hypertrophy has taken place, produces a weak pulse and an over-distended auricle. The distended and finally hypertrophied auricle throws an increased quantity of blood into the left ventricle when it is relaxed, which over-distends it and excites greater action for its expulsion; this induces a left ventricular hypertrophy which yields to the auscultator the displaced apex, increased area of cardiac dullness, and prolonged and intensified first sound during which the murmer is heard.

If the leakage is great in amount, and the auricle is unable to accommodate itself to the change, there is pulmonary, venous, or even arterial fullness, with resulting dyspnœa, cough, serous expectoration, and often hæmoptysis.

At this stage the right ventricle comes to the assistance of the left, and the circulatory function is maintained with no further change until right hypertrophy takes place, and the dilatation and increased power causes leakage of valves of right heart. Now the symptoms above described are exaggerated, dyspnœa and cyanosis are increased, epigastric and cervical pulsations are developed, venous engorgement causes gastro-intestinal catarrhs, hepatic and renal congestion. These induced diseases are readily recognizable by their characteristic symptoms, to which I need not allude. Constant headache, dizziness, etc., are the symptoms pointing to the same condition of fullness in the cerebral vessels. Still later the increased blood pressure and failing tone of the capillaries give rise to anasarca and effusions in the various serous cavities. Should it occur in the peritoneal cavity it impedes the circulation and respiration by pressure on the diaphragm; or the condition is made still worse by effusion into the pleuritic cavities, when all of the subjective symptoms are again intensified to an extreme degree, and unless relieved there is slow and sure failure till death by exhaustion comes as a grateful boon to the patient. The duration of the disease is long or short, depending upon the degree of leakage and the habits of the individual. In a small proportion of cases acute disease is lighted up by the depraved general condition, and brings about a more rapid fatal termination.

Before closing I desire to remind the members of the club that all valvular lesions are grave or not, depending upon the degree of obstruction which they offer to the circulation, or upon their tendency to excite accidental disease. The order in which they are ranked, beginning with the least serious, being: Aortic obstruction, mitral obstruction, mitral regurgitation, aortic regurgitation; the latter being by far the most serious. In bringing to your notice a paper upon this subject I have had constantly before me its threadbare character; nevertheless the tabular form of the occurrencies in and about the heart during one complete cycle I deemed worthy of your attention. The nature and frequency of the direct mitral murmur is also worthy of notice. A short review of the change which has taken place in the professional mind concerning the prognosis of valvular lesions would, I think, be of still greater interest; for certain it is that at present murmurs are frequently detected and watched through long years without inducing troublesome subjective symptoms, or the fatal results which would have been predicted for them a few years ago.

ON THE ETIOLOGY OF CERTAIN FORMS OF INSANITY: WITH A PROPOSED MODIFICATION OF TREATMENT.

BY F. BRADNACK, M. D.,
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HAMLET: *How came he mad?*
CLOWN: *Very strangely, they say.*
HAMLET: *How, strangely?*
CLOWN: *Faith, e'en with losing his wits.*
—HAMLET.

I profess a deep conviction that man was, and is, a fallen creature; not by accidents of bodily condition, or any other cause which human wisdom in a course of ages might be supposed capable of removing; but, as diseased in his WILL, *in that will which is the true and only strict synonym of the word I, or the intelligent self.*—COLERIDGE.

The dirt-philosophy of materialism and fatalism makes God a machine, man an automaton, and his future inheritance a coffin.—JEAN PAUL F. RICHTER.

We have it for an aphorism that it is the tendency of the human mind to run to extremes. Probably no better illustration of the truth of this assertion could be desired than that which is offered by some of the results of modern scientific speculation concerning the etiology of insanity, and certain other allied diseases, characterized by morbid action in the cerebro-spinal centers, and in the psychical and mental processes.

It will be the purpose of this paper to endeavor to establish two points: first, that certain doctrines now coming to be generally accepted relative to the causation of some forms of insanity are not based altogether on sound reasoning; and, second, that they fail satisfactorily to account for at least a portion of the phenomena they assume to explain.

To define it briefly, but fairly, the doctrine now taught by many of the ablest physiologists and psychological pathologists, and which for several years has been gradually gaining ground, is that every case of mental aberration, great or small, is the direct and necessary result of a prior or contemporaneous *physical* change in some portion of the nervous centers; and, furthermore, that such resultant aberrations can be occasioned in no other way.

These assertions are made partly as the outcome of examinations where, in certain cases, *post-mortem* lesions of the nervous centers have been found; and, partly by the assumption that, because discovered in some cases, they, therefore, exist in *all*, despite the fact that our present means of examination may fail to show them. Now, that physical lesions may exist in many cases of insanity, we do not deny. What we dispute is that physical lesions of brain structure are the *only* conceivable or possible factors in the etiology of insanity.

In this connection it will be proper to remark that for the scientific investigations and painstaking researches in the strict realm of fact, the writer entertains a profound respect and admiration. With demonstrated facts there can be no quarrel; and it is, therefore, not against facts, but against what appear to be unwarrantable assumptions from facts that we protest; against too hasty generalizations from insufficient data, which operations are in themselves essentially *un*scientific. Therefore, we desire to examine into certain of these theories, with a view thereby to ascertain whether the reasoning on which they are based be really as sound as it it is presumed to be.

It is not denied that in many cases of mental derangement contemporaneous physical lesions of brain structure may possibly exist. We are aware that in some cases the existence of such lesions can be shown. All this is granted. But we believe the fallacy to consist in this, that it is assumed that a physical lesion is *always* the necessary first cause of mental disorder. So far from accepting this theory, we think that lesions of the brain-centers concerned in intellection may in some cases be the result of *psychical* influences, centric or eccentric. That this cannot just now be mathematically proved, makes no difference; for, neither can everything claimed by the modern scientific theories be at present proved. Some of their deductions are as yet pure assertions and assumptions. They beg their question.

Partly as a recoil from the superstitions and ignorances of past ages, during which all instances of insanity were regarded as the result of direct diabolic action on the human soul; and, partly from the results of modern researches into the physiology and pathology of the nervous system, it has come to pass that we have allowed ourselves to be carried to the opposite extreme, namely, the assumption that *all* cases of insanity are invariably, and of necessity, the result of physical alteration of brain structure. We think we do not in so asserting, misconstrue or misstate the teachings of several of the recent writers on psychological pathology. For their *facts* we entertain deep respect. It is only when, leaving the domain of fact (the true scientific realm) to enter the field of dogmatic unproven assertion, that it becomes proper to take exceptions.

In certain cases of insanity the necropsies reveal definite changes in portions of the encephalon. In other cases of equally obvious insanity no abnormal change is discoverable by any means within our power. Yet it is thought by many that had we greater microscopic or chemical power, we might in every case discover definite changes in the cerebral structures. We do not deny that probably many of the morbid changes which occur in the brain elude our possible observation from their subtlety and minuteness; and it may safely be granted that had we greater microscopic or chemical power, we might detect much which now escapes notice. But, because in some forms of mental derangement physical alterations of brain-structure co-exist, it does by no means necessarily follow that, therefore, these physical changes exist in all cases. And, therefore, the assertion that they must, and do, so exist, is an assumption, unwarranted by the facts.

Moreover, unless we mistake her office, and misunderstand her functions, Science steps out of her way when she leaves the straight path of fact to meander through the flowery meads of speculation. In plainer words, she ceases to mind her own business. No man has a right to assume and declare that physical alterations of brain-structure must necessarily exist in all cases of insanity, for the simple reason that he cannot prove it. For the same reason he has no right to declare that extrinsic malign *psychical* influences never affect the human mind, for neither can he prove *that.*

To define our position more exactly, we suspect that in the reasonings of the modern physiologists and psychologists there exists a prime fallacy, which fallacy is, furthermore, the *fons et origo* of innumerable erroneous generalizations and conclusions. This is the materialistic theory, which practically denies the existence of the human spirit as a psychical entity; regarding the whole man as totally material, and mind as merely a form of force, in no way separate and distinct from matter, neither, of course, necessarily immortal. We believe that this fundamental misconception lies at the foundation of most of the recent scientific reasonings respecting insanity.

This fallacy mistakes the mechanism of a wondrous machine for the motive power of that machine, simultaneously confounding the two together, while denying the existence of one of them. It asserts that the brain is not only the organ of mind, but that it (the physical nervous structure) is also itself the will, the reason, the *ego*, and that which (call it what name we please) constitutes our individuality, our selfhood. This makes the spirit that is in man as mortal as his poor perishing body; makes it, indeed, identical with that body. The reasoning which results in such a melancholy conclusion is briefly this: It is argued (and very justly) that various considerations go to prove the brain to be the organ whereby mental operations are performed. So far, so good. But at this point an error is made, the error being the assumption that *because the brain is the organ of the understanding, and also the medium through which the will is manifested; and because disease or injury of the brain substance is frequently attended by morbid expressions of* (*or total suppression of*) *the motions of the soul*, THEREFORE, *this brain, this physical organ, is and must be, itself, the will, the reason, the spirit itself.*

This we believe to be the profound and fundamental fallacy. Perhaps its exact nature may best be made apparent by an illustration. For the performance of the functions of a steam-engine, the integrity of the boiler and its appurtenances is requisite. In this boiler is contained the motive power of the engine (the steam). When the boiler is intact, and the various parts of the engine in working condition, the motive power, acting through and from the boiler, produces certain definite and regular effects upon the cylinders and pistons; which, in their turn, produce regular revolutions of the wheels. But if the pistons be broken, or if the cylinders be injured so that the steam does not properly enter them, either the revolutions of the wheels are performed imperfectly, or they are entirely suspended. Now, let us suppose, for argument's sake, a person unacquainted with the nature of the motive power, and the exact construction of the machine. In his unaided endeavors to comprehend it, and to discover its motive power, he notices several instances in which the pistons of working-engines become broken by external injury, or by internal defect of structure. He also observes that in such cases there sometimes ensues a stoppage in the working of the engine. On this evidence he straightway reasons as follows: "It is my opinion, after careful observation, that the pistons constitute the true motive power of the locomotive, for the sufficient reason that, whenever they are broken or injured, the usual operations of the engine are either seriously interfered with, or entirely suspended."

Now, would not this logic be precisely similar to that employed by those who affirm the brain to be the spirit itself, instead of the mechanism through which the spirit operates? In opposition to this materalistic theory of the human mind, we think that the only true solution of many of the enigmas of insanity is to be found in regarding man as a spiritual being, as essentially a spirit, and not merely a perishable animal; in viewing the spirit as the real man, and the material body as merely an instrument of the spirit, a most marvelous and complex instrument, adapted to his material environment in the physical world which is at present his theater of action. In other words, we believe the psychology taught in the New Testament to be correct. Thus regarded it is as conceivable that man's spirit should be influenced by invisible extrinsic psychical forces, good or evil, as that his material body should be affected by visible forms of matter. Furthermore, it is as easily conceivable that man's spirit may be influenced by external psychical forces, benign or malign, independently of any bodily influence or condition whatever, as that his body may be injured after the departure of the spirit from it. If this be admitted, certain phases of insanity inexplicable by the materialistic theory become easily explicable upon assuming the action of extraneous evil psychical influences.

Should it be asked, What is the proof of the existence and operation of such influences? the answer is that proof positive, in a mathematical sense, cannot be given, for the reason that the nature of the facts at issue preclude this kind of proof. But, judged by the doctrine of probabilities, the hypothesis will appear to rest on a firm basis of sound reason. Moreover, we find it authoritatively asserted by the Founder of Christianity himself that at least *some* forms of insanity are the results of the operation from without of malign spiritual influences upon the human soul. The question that follows is: Do, or do not, facts psychological and pathological give any support to this theory of theosophic psychological pathology?

With a view to answering this question, it is one of the objects of this paper to suggest two points: First, that the supposition of the exertion of extrinsic malign psychical influences as causative of at least *some* forms of insanity is eminently reasonable; and, secondly, that the correctness of the supposition is rendered highly probable from the nature of the phenomena presented in certain cases. Without attempting to prove absolutely this theory, we believe, nevertheless, that strong presumptive evidence of its correctness may be adduced. The argument is that the action of malign psychical influences on the human mind will account far more philosophically for at least a certain proportion of cases of insanity than the physical theory will. In other words, we would invite the attention of scientific psychologists to the New Testament (or theosophic) doctrine of the etiology of at least some forms of insanity; namely, the possible influence upon the human mind of an extrinsic, malign, perturbing, psychical force; at some times slight, at other times of a power so tremendous as to entirely deprive of freedom its unfortunate victim.

As before said, it is not asserted that this evil external influence operates necessarily in all cases; neither, perhaps, does it ever operate entirely unaided from within; that is to say, it would, *à priori*, seem reasonable to assume that the most favorable opportunity for the manifestation of this extrinsic influence would be at the time of the existence of an intrinsic weakness, at the time when, from some cause or other, a loop-hole of entrance had been made into the human citadel. For instance: Melancholia may result naturally from a too rapid disintegration of the cerebral cells, caused by undue emotion, or overwork of the brain. Here is a loop-hole into the citadel. Now, if we grant the existence of a spiritual enemy of mankind, ever watchful of opportunities to injure, and, if possible, to destroy us, it does not require much further concession to admit that such an enemy would be very likely to avail himself of any and every chance to take the human soul at a disadvantage. In this consideration is it of no weight that Shakspere (he who saw deeper and further into human nature than any other mortal man) apparently held this identical opinion? If he did not hold it, what, pray, is the meaning of Hamlet's words:

> "The devil hath power
> To assume a pleasing shape; yea, and perhaps,
> Out of my weakness and my melancholy,
> (As he is very potent with such spirits),
> Abuses me to damn me"?

and, also, the allusions to the malignant operations of the "foul fiend" in *King Lear?* Indeed, Shakspere's words define very accurately the theory here advanced, namely, that a powerful evil being, or beings, may, temporarily, take partial, and sometimes (apparently) complete possession of the human will; meaning by the term "will" that something which, *per se*, constitutes the man himself.

Now, are there in any cases of insanity which come under our observation as physicians any phenomena which would sometimes appear to indicate that a demoniac power had assumed control of a man? Will not the records of every insane asylum furnish numerous affirmative answers to this question? But by way of illustration we here cite two modern cases from the writings of distinguished alienists. The first, from the French of M. Georget, we transcribe from Dr. Hammond's treatise on nervous diseases:

"Henriette Cornier, a woman twenty-seven years of age; was of a joyous disposition, and gentle in her ways, and particularly fond of young children. In June, 1825, a notable change ensured in her; she became sedate, seldom laughed, sighed often, was taciturn, and neglectful of her work. She was accordingly discharged from her service as domestic, and returned to her friends. She soon after made an attempt at suicide by throwing herself from the parapet of a bridge, but was prevented. She then entered the service of Madame Fournier, still being disposed to melancholy, notwithstanding all efforts made to restore her. On the fourth of November her mistress went out, leaving Henriette at her work, and directing her to go to a shop kept by a woman named Belon and get some cheese. This woman had a very beautiful little daughter, not two years old, for whom Henriette had always manifested a great liking. On this occasion she fondled the child as usual, and persuaded her mother to let her take it out to walk. Henriette took the child to Madame Fournier's house, and going first to the kitchen, obtained a large knife, with which, and the child, she went to her own room. Arrived at her own chamber, she laid the infant on its back on the bed, and seizing its head with one hand, she with the other drew the knife rapidly across the neck, and severed the head from the body before her victim could utter a cry. Before, during, and after this crime, she had, as she declared, no emotion or feeling of horror. On the contrary, she was calm, collected; felt neither pleasure nor sorrow, but apparently acted mechanically. Two hours afterward, the mother came for her child. Henriette stood at the door. "Your child is dead," she exclaimed; and then, entering the room, seized the head of the murdered infant and threw it into the street. On the arrival of the officers, she was found sitting in the room with the dead body, gazing at it, her hands covered with blood, and the knife near. She did not deny her crime, and exhibited neither penitence nor remorse. "I intended to kill it," she said; and, on being interrogated, declared that she had no particular motive; that she had experienced the inclination, and she was destined to perpetrate the act."

The following case is transcribed from Dr. Maudsley's lectures on "Body and Mind":

"Take, for example, a case which is one of a class, that of the late Alton murderer, who, taking a walk one fine afternoon, met some little girls at play, enticed one of them into a neighboring hop-garden, there murdered her, and cut her body into fragments, which he scattered about, returned quietly home, openly washing his hands in the river on the way, made an entry in his diary: "Killed a little girl; it was fine and hot"; and when forthwith taken into custody, confessed what he had done, and could give no reason for doing it."

These are but two of many similar cases which might be cited from the records of insanity. But, do we not almost daily read in the newspapers of actions to which the term "fiendish malignity" is precisely appropriate,—actions which, from their horrible atrocity, we almost instinctively define as devilish, fiendish? Glance for a moment at the case of the murderer Williams, whose fearful story is so graphically narrated by De Quincey, under the title of "Three Memorable Murders." Here was a man whose sole purpose in life was the murder of his fellow-creatures; and, in each case, persons who were previously unknown to him, and who had never in any way done him the slightest injury. If ever murder was practised as a fine art, and regarded æsthetically, it was in this man's case. De Quincey expressly declares that the evidence went to show that Williams committed murder from pure love of it. Now, in considering these three cases, those of Henriette Cornier, the Alton assassin, and Williams, the London murderer, who can deny that, given a predisposition to certain forms of crime in a human soul, a powerful spiritual enemy of mankind *may* intensify the existing inclination, and that, gradually gaining entrance to the mental outworks, he may not by degrees force his way, until he obtain possession of the citadel itself? Who shall deny, at least, the possibility of this? The admission of such a possibility is all that is required in the present argument. As presumptive proof of its soundness, appeal may safely be made to facts daily before us. Will any theory of physical brain degeneration or alteration explain as satisfactorily the horrible murders and other crimes, now of almost daily occurrence, as will the supposition of a temporary demoniacal possession (or *obsession*) of the individual? Granting the existence of a malign spiritual invisible power, inimical to man, what finite mind shall mark the limits of its possible action? Is it not, moreover, reasonable to suppose that the subtlety of its approach will in most instances make its detection impossible to minds like ours, even when most wary, and most carefully fortified? How much more easy, then, will be the approach of such a power toward, and its entrance into, a mind robbed by physical disease of some of its natural defences?—a mind, for instance, laboring under the "weakness and melancholy" referred to by Shakspere? Is it not exceedingly reasonable to suppose, first, that the defences of the soul may be weakened by intrinsic causes; and, second, that this weakness may be taken advantage of by an extrinsic evil power? But, in addition to its innate probability, we have, if we accept the teaching of Scripture, the declaration several times repeated by the Divine Physician himself, that there is a possibility that the human will may be subjected to a more powerful evil will; while, historical records show that such subjections were of frequent occurrence in Palestine at that time. If this testimony be admitted, the question at once arises, If evil beings could in those days obtain control of human wills, *why not now?*

There exists, furthermore, in the very nature of the (so to speak) psychical lesion in certain cases of insanity, an apparant hint of the direction from which the blow has come. Cases are frequent in which the insanity assumes the form of an ineradicable conviction on the part of the sufferer that he or she has committed the unpardonable sin (whatever that may be), and that, in consequence, eternal damnation is decreed to him or her. How hopelessly incurable such cases usually are, we do not, as physicians, need to be told.

Now, granting the reasonableness of the theory here advanced, of the possible action of an inimical spiritual power on the human mind, would not the production of just such a delusion be very much what might be expected under the circumstances?

Again, in absence of exact knowledge, what would seem more likely to be the effects of a demoniac perversion of the human will than the nefandous thoughts, words and deeds which we know are habitual in certain cases of insanity, where occur language and actions so utterly vile, and so unutterably bestial, obscene and horrible, as to be inexpressibly appalling to any one who believes man to have been originally framed in the divine image?

Furthermore, does not the fact that the most fearful profanity, and the most dreadful blasphemies habitually characterize the speech of other maniacs, point in the same direction, and indicate the infernal source whence they, and such like, come? For, unquestionably, there is profound truth in the old Greek proverb which tells us that *Wickedness proceedeth from the wicked.* If these, and other considerations, shall lead us to admit the reasonableness of the theory here advanced, it appears to the writer that a glance at the results of our present psychological therapeutics will afford us some additional evidence in support of the position. Now, what are the results usually obtained in cases of confirmed melancholia, hypochondriasis, and mania? Are they flattering? Nay, are they even reasonably satisfactory? We all know what the answers to these questions are. And, knowing the inevitable answers, is it not about time to ask ourselves another question, namely, whether it may not be possible that we have hitherto never fulfilled properly the therapeutical indications; in plainer words, never prescribed the right remedies? We make the enquiry, we trust, in all modesty, asking, "as one who fain would know."

If it be true that hitherto we have made the mistake of attempting to heal purely *psychical* lesions by *physical* remedies, is it strange if our efforts have been unsuccessful?

The Divine Physician of mankind successfully treated several cases of insanity, included in which were some of the worst forms of what we now call acute mania. It is recorded that, after curing one such case, He distinctly informed his disciples (whom he also commissioned to treat similar diseases), that "that kind" could be healed only "by fasting and prayer." Now, are we wiser than the Divine Physician; or is our knowledge of psychological pathology likely to be greater than that of Him who made us?

On the other hand, is it not just within the scope of possibility that, in our wisdom, we have left unused and untried the most potent, and, perhaps, the only possible therapeutical agent in this malady? We ask whether it is not possible that in neglecting special prayer to God for the removal of this most terrible disease, we have not unwittingly omitted to use the only remedy possible against it? Whilst gladly recognising the improvements that of late years have been made in the asylums and institutions devoted to the care of the insane, chief among which is the kind and humane treatment now sometimes employed; yet, may it not be questioned if now, at this day, we can furnish a much more satisfactory answer to Shakspere's query:

> "Canst thou minister to a mind diseased?"

than could have been supplied in the poet's own day?

Without depreciating one atom the functions of the scientific physician, is it not very probable that the treatment of some forms of insanity belongs conjointly to the clergyman and the physician?

While it must be admitted that we have made immense improvements in the *care* of the insane, can it be truthfully asserted that we have made a corresponding progress in the *cure* of the insane?

In conclusion, the very fact that the proposed treatment has hitherto never been systematically tested, is in itself a sufficient reason why it should at least be tried; for, it needs no argument to show that it is our duty, not only as physicians, but as citizens, and members together of poor afflicted, suffering humanity, to give those cursed by this most direful of all diseases, the benefit of every and *any* rational remedy that can be suggested.

It may be that if the plan of conjoined physical and psychical therapeutics here suggested were adopted in certain cases wherein they seemed indicated, we might, perchance, discover that, in the noble words of Tennyson:

> "More things are wrought by prayer
> Than this world dreams of."

Anyhow, if the lesions in question be really psychical; if insanity be sometimes in all verity a spiritual disease, is it not truly preposterous to attempt to cure it by means of physical remedies?

It is, furthermore, just conceivably possible that there may yet remain some few things in heaven and earth of which even we of the medical profession, of the nineteenth century, have not hitherto dreamt; and, should it chance that the therapeutical method suggested in this paper prove inadequate (which method, by the way, is not put forth as original by the writer, it having been clearly taught in Palestine, though not in a medical school, above eighteen hundred years ago), it can at least do no possible harm to test its efficacy; while, in its favor this may be said, that, if it present no other recommendation, it unquestionably possesses one advantage over other remedies—*it costs nothing:* for, in His own merciful words, He who made us is ever *more willing to hear than we are to pray.*

"So Doctor Pellet is dead?" "Yes. He was an ornament to his profession, He has saved a great many lives." "Why, I did not know that he had any practice to speak of." "He had n't. He saved life in another way." "How was that?" "By dying so young."

THE ARTIFICIAL FEEDING OF INFANTS.

BY DELANCEY ROCHESTER, A. B., M. D.
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[Read before the Physicians' Club.]

The subject of the artificial feeding of infants is one that can never cease to interest both the profession and the laity. Its importance cannot be overestimated; for the happiness of a human life, and often that of more than one, depends upon the development of the child, and as "man is what he eats," it is evident that the choice of a proper food in his stage of development will effect his whole after life.

There is no question but that under ordinary circumstances the best food for an infant is its own mother's milk; still when from any circumstances it becomes necessary to find a substitute for nature's food, in the choice of that substitute there are several things to be taken into consideration. But, whatever be that substitute, we should decide—and this is a point worthy of more consideration than is usually given to it—how much a child should receive at a feeding, and how often it should be fed. Then we may proceed to consider how nearly we can approximate human milk, for it is evident that we should make our food correspond as closely as possible to that furnished by nature. Then whether this food is free from the dangers of the formation of tyrotoxicon or other poisonous agent; and, if it is not, what is the most practical way of making it so.

In order to answer our first proposition as to how much a child should receive at a feeding, let us review our physiology and discover what happens to the food in the baby. The food first enters the mouth, but as the digestive tract adapts itself to the food procurable, and as in milk there is no starch, there is therefore no mouth digestion. The next digestive cavity that the food enters is the stomach; here the albuminoids only are digested, although all the food enters the stomach and remains there a certain length of time before it is passed on to the duodenum, where it meets with the bile and pancreatic juice. According to Zweifel "the pancreas of new-born children contain trypsin and the fat-decomposing ferment, but not the diastolic one." As far as digestion is concerned, the alkaline bile renders the strongly acid chyme, thus aiding the action of the pancreatic juice which acts only in the presence of an alkaline reaction, aids also in the absorption of fats, and is said by some physiologists to contain a diastolic ferment. Whether this diastolic ferment exists in the bile of a new-born child has, as far as I know, never been determined; but as it is not normally needed in a nursing baby it is probable that it does not exist at that period of life.

The kind of food that a new-born child is capable of digesting and therefore the kind that we should furnish to it is, as indeed we should judge from the analysis of the food furnished by nature, one that contains albuminoids and fat, but no amylose.

Having determined upon a food that contains these constituents and *no others*, save the diluent water and a very slight amount of inorganic salts, we return to our first proposition as to how much we should give the infant at a feeding.

As I said before, this is a point of vast importance and one that is too often neglected altogether in the directions that the physician gives the nurse or mother as to the feeding of the child. You will remember that I said that *all the food* enters the stomach and remains there a certain length of time, until gastric digestion is finished. This being the case, in order to learn how much we should give at a feeding it is necessary to call to mind our anatomy and find out how much a baby's stomach will normally hold.

According to Landois, "the capacity of the stomach of a new-born child is 35 to 43 cc,"—about one ounce to an ounce and a half. The stomach of an infant 5 days old, which was removed by Dr. C. W. Townsend of Boston, had a capacity of only 25 cc. This last piece of information I take from an article by Dr. T. M. Rotch of Boston, which appeared in the August number of the *Archives of Pediatrics.* From the same article I quote the following: "Ssnitkin, after a series of careful investigations in the Children's Hospital at St. Petersburg, to determine the amount which should be given in the first thirty days of life, finds that the greater the initial weight, the greater the gastric capacity. His general results show that one one-hundredth of the initial weight should be taken as the starting figure and to this should be added one gramme for each day of life."

The average weight of the new-born child being 6 to 8 pounds, about 3,000 to 4,000 grammes, the starting figure would be 30 to 40 grammes, or one to one and one-third ounce.

This corresponds closely to the capacity of the stomach as given by Landois and by Townsend.

To increase this amount at the rate of a gramme a day would be to add a half-teaspoonful every second day. That means an increase, gradually brought about, of an ounce a month.

I cannot emphasize too much the importance of regulating the amount of food that should be given at a time to the young infant. When we remember that the ordinary feeding bottle contains from 6 to 8 ounces, and then consider the actual capacity of the infant's stomach, is it any wonder that nature rebels against the abnormal distension, and that as a consequence we have all sorts of disturbances of the digestive tract even though using a food that, given in smaller amount, might perfectly agree?

Having determined the amount of food that should be given at a time, the next question to decide is, How often should the child be fed?

To answer this question we must appeal to nature and observe how often the infant nurses its mother. In the early days of life we find that, as a rule, the baby nurses about every 2 to 2½ hours, a state of affairs that we should naturally anticipate, for in this state of rapid development, the metabolic activity—or stoff-wechsel as the Germans call it—is greater, and so there is the greatest need for frequent feeding, for "nutriment is required not only for the excess of waste but also for the rapid proportionate growth."

After the first six weeks the intervals between the feedings may be increased to three or four hours, and kept at that figure for six or eight months, the increase in the quantity at each feeding—an ounce a month—being kept up until the eighth or tenth month, after which time it is better not to increase the amount unless there is evident demand for it on the part of the baby; eight to ten ounces being, as a rule, enough for a child of that age to take at a feeding.

Having now answered the first of our propositions as to how much at a time and how often a child should be fed, we come to the consideration of the second: How we can most nearly approximate human milk with the means at our disposal?

To begin with we must know the constituents of human milk in order to make an approximation.

The analysis of human milk by Dr. Chas. Harrington, of the Harvard Medical School, as presented by Dr. Rotch, is as follows:

	Reaction	Water	Total Solids	Fat	Albuminoids	Sugar	Ash
Human Milk.........	Alkaline	88	12	3-4	1-2	7	0.1-.2

In every-day practice we are necessarily limited in our search for a substitute for human milk to some modification of cow's milk. We must thererore know in what particulars cow's milk differs in its composition from human milk.

I again make use of Dr. Rotch's article in presenting to you his table of comparison between human and cow's milk :

HUMAN MILK.		COW'S MILK.
87—88	Water	86—87
13—12	Total Solids	14—13
3—4	Fat	4
1—2	Albuminoids	4
7	Sugar	4.5
0.2	Ash	0.7
Small proportionately	Coaguble Albuminoids	Large proportionately.
Scarcely preceptible in test tube.	Coagulation by Acids	Marked in test tubes: greatest with pure milk; least, when mixed with lime water or boiling water.
Not present	Bacteria	Present.
Alkaline	Reaction	Acid.

Cow's milk differs, then, in several important factors : It is acid in reaction, contains too great an amount of albuminoids, too much ash, not enough sugar, and contains also bacteria.

Cow's milk unchanged is evidently unfit for the infant's use.

Cow's milk simply diluted with lime-water is also unfit; for, although the reaction is made alkaline, and the casein is reduced to the proper proportion, the fat and the sugar are reduced far below their proper proportions. Cow's milk diluted with barley-water has all the disadvantages of that reduced by lime-water and in addition keeps the acid reaction and introduces starch in slight amount.

On account of this necessity for modifying cow's milk a number of patent foods for infants has been thrown upon the market. Each of these—with two exceptions—has one or two serious faults: either it is acid in reaction or it contains a foreign ingredient—starch, or it is both acid and contains starch. Moreover, most of them differ more or less in other particulars from the standard human milk. I shall exclude them all, then—excepting the two mentioned—from consideration. But there is one that does not contain starch and is alkaline in reaction that I wish particularly to mention, because of the great harm I think it may do in those very cases in which it seems to agree best; namely, the so-called humanized milk, made by peptonizing cow's milk.

It is a physiological axiom that if an organ, specialized for the performance of a certain function, does not perform that function for a period of time, it becomes proportionately weakened as regards that function, and if at any future time it is called upon to undertake the performance of what should be its normal function, it fails wholly or in part.

In the case of the stomach, if its food is pre-digested—and remember, please, that the stomach acts only on albuminoids, that is, in milk, the casein—its proper function is interfered with, and instead of receiving the proper amount of exercise so necessary to its well-being in this stage of development, its secretory organs are allowed to fall into a state of pernicious disuse, and a life of misery from dyspepsia is prepared for the helpless victim. To quote from Dr. Rotch again: "Peptonized milk, then, is a food consisting of too large an amount of digested casein, too little sugar and a very large over-proportion of ash."

To proceed in our search for a proper food for the babies there is a combination that has the advantage of not being a patented food. It is that suggested some years ago by Dr. Arthur V. Meigs of Philadelphia. It consists of:

		Reaction	Water.	Total Solids	Fat.	Albuminoids.	Sugar.	Ash.
Cream (14-16 per ct. fat)	2	Alkaline.	88.42	1.11	1.11	1.11.	6.26	0.21
Milk	1							
Lime water	2							
Sugar water	3							
	8							
Sugar of milk, i dr. viss grs.; water, i oz.								

This is a most excellent combination, being a very close approximation to human milk. Are there any objections to it? Yes; the most serious one is that it makes use of *supposed* pure cow's milk. Now, aside from the fact that cow's milk almost invariably contains bacteria, it is a very uncertain article as to purity in other respects. Doctor Victor C. Vaughan, Professor of Physiological Chemistry in the University of Michigan says, in an article in the *Philadelphia Medical News:* "Even under the most favorable conditions milk can be kept unchanged only for a short time in summer." So we run the danger of poison from tyrotoxicon or other poisonous agents; this might be overcome by sterilizing the mixture, but boiling changes its physio-chemical character, and other modes of sterilization are too complicated, and hence apt to be imperfectly carried out. But in addition to the fact that the milk may have been kept too long, it may have been churned up in its ride over rough roads; it may have been nicely diluded at the honest farmer's, and again at the corner hydrant, and so have its percentage composition entirely changed—or it may be all right; but this last is only one of many possibilities.

Practically, I have never given this combination a fair trial, as in the only case in which I have used it the amount given at a feeding was much too large, and it failed utterly as did every thing else that was tried except a certain modification of condensed milk.

It is this condensed milk that is the other of the two patented foods that do not contain starch and are not acid in reaction. But I mention this with very different intentions from those with which I mentioned the peptonized milk. The condensed milk referred to is the so-called Gail-Borden Eagle Brand Condensed Milk. I mention this brand because it is the only one with which I have had practical experience. Some other make may be equally good.

The analysis of condensed milk as given by Dr. Harrington is as follows:

	Reaction	Water	Total Solids	Fat	Albuminoids	Sugar	Ash
Condensed Milk	Neutral	28	72	10	10	50	2

Of course no one would think of giving condensed milk undiluted. But before proceeding to discuss how it must be modified to conform to human milk, let us see whether it has any advantages over ordinary cow's milk. You remember that the chief disadvantages of cow's milk as a basis for our food are, that it contains bacteria, is acid in reaction, and as procured from dealers is a very uncertain article as to purity.

Now as to condensed milk, the process of manufacture sterilizes it, a very great point in its favor; its reaction is not acid; and we can always know what we are getting wherever we may be; in other words, it is a very certain article as to purity.

Now if we dilute this condensed milk with six parts of water instead of nine, as is usually done, we have a very close approximation to human milk.

	Reaction	Water	Total Solids	Fat	Albuminoids	Sugar	Ash
Condensed Milk 1. Boiled Water 6. 7.	Alkaline	89.71	10.29	1.43	1.43	7.14	.29

This corresponds closely to human milk; the only difference being that the reaction is neutral and the quantity of fat is considerably below the normal, being 1.43 instead of 3 to 4 parts in 100.

These defects can be easily remedied by the addition of lime-water and cream in the following proportions:

	Reaction	Water	Total Solids	Fat	Albuminoids	Sugar	Ash
Condensed Milk 1. Cream (14 per cent. fat) 1. Lime Water 1. Boiled Water 4.	Alkaline	87.71	12.29	3.43	1.43	7.14	.29

As lime is soluble in water only in the proportion of 7 parts in 10,000, the amount of lime-water used in the above mixture, while sufficient to render it alkaline, does not materially increase the amount of ash. Here, then, we have an excellent food corresponding most closely to human milk, and free from the objections to Dr. Meigs' combination in that its basis is an article which can be obtained in a pure state and kept, with proper care, almost indefinitely, even in the hottest summer.

The only possible objection to this article, that I can imagine, is that it is a patented food. Of patented foods in general Dr. Rotch says: "My own opinion is that they must necessarily be unreliable; they are thrown on the market in such numbers that the competition is extreme, and when once they have made a reputation I cannot but feel that irregularities and changes, slight perhaps in the eyes of the makers, may unintentionally creep in and carry their analysis still further from that of the standard human milk than it was in the beginning."

Now condensed milk does not pretend to be an imitation of human milk. To quote from the advertisement of the firm that makes the Eagle brand: "It is simply pure milk of the best quality, from which a large percentage of water has been evaporated, combined with the finest grades of refined sugar."

Moreover it has been on the market for twenty-five years, and seems to have stood most excellently the test of time. Dr. Rotch's objections to patent foods as a whole seem not to hold against this brand of condensed milk.

It is an old saying that the proof of the pudding is in the eating; and we have now to consider how this modified condensed milk acts in actual practice.

I have had a number of cases during the past year in which unfortunately from one cause or another the mother's milk has been very slight or has failed entirely. In all of these cases I have used the modified condensed milk with most excellent results, unfavorable symptoms arising only where too much food has been given at a feeding.

There have been two cases in which it has been necessary to use a less than the theoretical amount of the condensed milk; and this leads me to say that in our practice we must not allow ourselves to be bound by any iron-clad rules, but rather must watch carefully the effect of the food used, inspecting the infant's stools ourselves, not relying on the report of the mother or nurse as to the appearance of the same.

In every case I think it would be well to have a quantitive examination of the mother's milk made by a competent chemist, so that, if later it should become necessary to obtain a substitute, we would have data by which to compound our mixture; for in particular cases, sometimes one, sometimes another factor differs in amount from the standard average, and we should follow nature closely whenever we can.

In conclusion let me re-state, in the form of some practical directions, what I deem the important points of the subject under consideration.

Whatever be the substitute we employ, let the amount given at a feeding be proportionate to the capacity of the child's stomach. It cannot be too strongly impressed upon the mind of the mother that she must not give her child too much food. There is always a greater danger from over feeding than from under feeding. Begin, then, with an ounce to an ounce and a half according to the weight of the child, and as the child grows older gradually increase the amount at the rate of one-half a teaspoonful every second day, until the eighth or tenth month.

Feed at first once in two hours. After the first week gradually lengthen the interval until at the beginning of the third month the interval is three hours in the day time and four or five hours at night.

The food that conforms most closely to the requirements of a substitute for mother's milk both in theory and practice is that combination consisting of

Condensed Milk	1.	part by volume.
Cream (14 per cent. fat)	1.	" " "
Lime Water	1.	" " "
Boiled Water	4.	" " "

I think I cannot do better than add here a table showing a comparison of human milk with the modification of condensed milk that I have suggested.

HUMAN MILK.		MIXTURE OF { Condensed Milk 1. Cream (14 per cent. fat) 1. Lime Water 1. Boiled Water 4.
87—88	Water	87—71
13—12	Total Solids	12—29
4— 3	Fat	3.43
2— 1	Albuminoids	1.43
7	Sugar	7.14
0.20	Ash	0.29
Alkaline	Reaction	Alkaline.
Not present	Bacteria	Not present.

Torsion of the Pedicle of Ovarian Cysts.—(By M. Terrillon, Paris.)—All ovarian cysts with long enough pedicles, if they are free from adhesions, turn upon themselves. If the torsion is moderate it passes unperceived, but if it is greater, grave consequences may result on the part of the tumor, intra-cystic or intraparietal hæmorrhage, or an augmentation of tension may determine the rupture of the cyst. All these accidents may be imputed to the impediment to the circulation produced by the torsion. When the pedicle is twisted, the veins are compressed before the arteries. Consequently, blood may still enter the tumor which cannot return. But the torsion may extend still farther, all the vessels become obliterated and the cyst become gangrenous. Finally, in still other cases, the pedicle is completely ruptured, and the cyst is bound to die unless it may derive nutriment through vascular adhesions. One of the almost constant consequences of torsions of the pedicle of ovarian cysts is the determination of nutritive troubles in the cysts, the first result of which is the alteration and the exfoliation of the epithelium which normally covers them. This denudation determines the formation of adhesions, which may be favorable to a certain point, since they may prevent gangrene of the cyst, but they always have the extreme inconvenience of rendering the operation very laborious, often even impossible. In 100 cases, the author has met with torsion of the pedicle four times, not counting incomplete torson. In three cases the pedicle seemed as if interrupted by a fibrous cicatricial ring. The adhesions were considerable, and rendered the operations very laborious. In the other case the pedicle was completely separated, and its two extremities were found adherent, one to the cyst and the other to the cornu of the uterus. The cyst had been able to live by deriving its vascularization from numerous adhesions which singularly complicated the operation.

From a clinical standpoint, four classes of cases may be distinguished: (1) Those in which the torsion occurs so slowly as to cause no accident; however, adhesions are formed even in these cases: (2) Those which are announced by slight accidents or by the pains of meteorism and which then pursue the same course as the preceding. It is in these cases that the cyst may diminish and disappear by slow absorption. (3) Acute case which are announced by accidents, acute but of brief duration. (4) Cases of rapid and complete strangulations which are accompanied by peritoneal troubles, grave and often fatal—rupture of the cyst, intra-cystic hæmorrhage. The conclusion to be drawn from these facts is that ovariotomy without previous puncture should quickly be performed. In acute cases with peritonitis, surgical intervention is indicated and gives excellent results. In chronic cases, early intervention is clearly indicated, for it permits ready destruction of adhesions, which it may not be possible to overcome later. Even in cases of former mortification, with indestructible adhesions, a cure may yet be hoped for by freely opening the cyst and causing suppuration with drainage.—*French Congress of Surgery*, *Revue de Chirurgie*, *November*, *1886.*—*Annals of Surgery*.

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BUFFALO, N. Y., DECEMBER, 1887.

THE ANNUAL REPORT OF OUR CITY BOARD OF HEALTH.

The volume for the year 1886 has recently been issued, which, though quite late in appearing, atones for its tardiness by the valuable nature of its contents. It comprises a hundred and fifty pages of valuable reading matter, and does credit to the various members of the Board concerned in its preparation. The report of Dr. Briggs, the City Health Physician, filling thirteen pages, evinces a most careful attention to the best interests of the public in health matters. His recommendations are wise and most reasonable, and deserve the earnest and favorable consideration of the city authorities. None are better fitted to speak of what our city needs in the way of sewerage and paving than our present indefatigable city physician, and everything which he in this report advises bears the stamp of necessity.

The balance of the volume is made up of reports and essays by Dr. Briggs' associates. Among them the following seem to call for special mention: The City Chemists' report is largely devoted to the analysis of milk, and inasmuch as none speak with more authority in this matter than Prof. Witthaus, we reproduce herewith some of his statements and conclusions. Concerning the method adopted he says:

> After careful comparative trials, Sharples' method was selected as the most manageable and accurate, and the results given below were obtained by that method, which may be briefly described as follows:

Five cubic centimeters of the milk are measured into a weighed, flat-bottomed platinum capsule, and the capsule and milk weighed as rapidly as possible, the specific gravity having been determined immediately before the measurement. The capsule is then heated over a water bath for an hour and a half, and then in an air oven at 105° C. for half an hour. After cooling, the capsule and residue are weighed. The weight so obtained, minus the weight of the capsule, is the weight of total solids in five centimeters of milk. The capsule is now filled with rectified benzine of low boiling point, and allowed to stand half an hour; the benzine is poured off (care being taken not to carry off any of the solid material) and fresh benzine added. After another half hour, the second quantity of benzine is poured off, and the solid residue washed twice with fresh portions of benzine. After half an hour's heating in the air oven at 105° C., the capsule and contents are again cooled and weighed. Subtracting from the weight so obtained that of the capsule, we have the weight of "solids not fat." in five centimeters of milk; and this, subtracted from the "total solids," gives the amount of fat. The capsule is then heated until a white ash remains, when it is again cooled and weighed. Subtracting from this weight that of the capsule, we obtain the weight of "ash" in five centimeters of milk. The sugar determinations were made partly by titration with a cupro-potassic solution of known strength and partly by means of the polariscope. The results obtained by the above methods represent the amount of each ingredient *by weight* contained in five *volumes* of the milk. In order that comparable results may be obtained, it is necessary to reduce these results to percentages by weight. This may be accomplished in two ways: either by multiplying the result by twenty and dividing by the specific gravity, or by multiplying the result by 100 and dividing by the weight of five centimeters. It was found that the latter method always yields somewhat higher than the former, owing to a slight loss of weight of the milk during the process of weighing, however rapidly this be executed. To diminish this error, the final percentage was always obtained by taking the mean of the results yielded by both methods. The specific gravity determinations were made at the same temperature as the weighing, and by the use of the Westphal gravity balance.

* * *

Chemical Standard of Purity.—A great number of analyses of cow's milk, made in different countries by different analysts and under varying conditions of food, climate, season, breed, etc., have shown that, while this fluid varies somewhat in composition, the variations are confined within narrow limits.

* * *

The amount of total solids alone is, therefore, insufficient to indicate the purity of milk; account must also be had of the amount of fat and of "solids not fat." Wanklyn suggested that milk shown to contain less than twelve and five-tenths per cent. of total solids, nine and three-tenths per cent. of solids not fat, and three and two-tenths per cent. of fat, should be considered as adulterated, these being less than the amounts which he found in pure, healthy cow's milk. The

British Society of Public Analysts has adopted the standard of eleven and five-tenths per cent. solids, of which two and five-tenths per cent. is fat. Chapter 202 of the Laws of this State for 1884 declare that "if the milk be shown to contain more than eighty-eight per cent. of water or fluids, or less than twelve per cent. of milk solids, which shall contain not less than three per cent. of fat, it shall be declared adulterated."

The standard formerly followed in my reports to this Board has been that of the Society of Public Analysts, adopted as being that giving the dealer the greatest amount of benefit of doubt. I have become convinced, however, that this standard is too low, and that many cases of adulteration have escaped prosecution. During the past year, the Board has formally adopted a standard similar to that of the State Law.

It is obvious that, as this standard is based upon the composition not of the best, but of the poorest, milk normally yielded by the cow, it is possible, under it, to water or skim a rich milk without fear of detection. Such a proceeding is, however, not likely to be long continued with impunity, as the adulterer, having no analytical data to guide him, and, probably, depending upon the indications of a lactometer, is liable to push his adulteration a little too far, or else have his milk fall below the point where it will bear the addition of water. Moreover, so long as the product sold does not fall below that which may be yielded by a healthy cow, the community suffers no injury.

In a further article on the Water Supply of Buffalo Prof. Witthaus makes the following statement which deserves the greatest publicity.

To determine whether we ourselves contaminate the water, samples were taken from the Niagara river, from Lake Erie, and the mouth of the Buffalo river, and compared with each other and with the service water. The Buffalo river discharges a water which probably no one would attempt to drink under ordinary circumstances, yet, probably owing to the position of the inlet pier and the direction of the currents, it does not seem to exert any influence upon the main body of the Niagara water, as the analyses of samples taken around the inlet pier gave results almost absolutely identical with those obtained with a sample of Lake Erie water taken on the same day. It would seem, therefore, that at that time, at all events, neither the Buffalo river nor the location of the dumping-grounds exerted any injurious effect.

To determine whether the water of the lakes suffered any deterioration before reaching here, I obtained samples of the service waters from Chicago and Cleveland, and took a sample here at nearly the same time. The results of analyses of these samples show that our water is better than that obtained from the lake at Cleveland, and but slightly inferior to that of Chicago.

With regard to the variations in composition of our water, it may be said that every water supply is liable to variations from purely natural causes, depending upon season, direction and force of wind, ice, etc. As an instance of this, I would cite the analyses of Lake Champlain water obtained from Burlington, which a mean of six analyses made last September showed to be positively bad, while at this time it is excellent, although but little better than our own.

Dr. W. H. Thornton reports the results of a careful inspection of the public school buildings, with full numerical data, from which we can hardly quote here.

In a paper on the Milk Supply of Cities, Dr. Edward Clark calls attention to the sources of milk contamination, among which are mammitis, tuberculosis or pulmonary consumption, contagious eczema, or foot-and-mouth disease, and that terrible affection which is now only seen in certain localities in this country, pleuro-pneumonia. Rinderpest or contagious enteric fever has not yet made its appearance on this side of the Atlantic. Of foot-and-mouth disease he says:

> A vast amount of evidence has been produced to show that this disease can be communicated to man, or, at least, that milk from cows suffering from foot-and-mouth disease may produce, in the persons drinking it, a disease of a similar nature, characterized by aphthous ulceration, general redness, and diphtheritic-like coating of the mucous membrane of the mouth and fauces, with swoolen tongue, and, in rare cases, affections of the feet.

Again:

> Milch cows occasionally suffer from morbid conditions, whose pathology is little understood. Their milk is rendered unfit for use, and may be productive of serious results. This fact is well exemplified by a remarkable outbreak which occurred at Aberdeen, Scotland, in April, 1881, an account of which is recorded by Dr. Beveridge in the *Sanitary Record*, Vol. II., New Series, p. 425. The persons using the milk were attacked with a fever of a peculiar type. "The cases were limited to the area of a particular milk supply, eighty-eight per cent. of the families using the milk being attacked."

From "Parke's Hygiene" he quotes as follows:

> "The scarlet fever and diphtheria poisons have probably got into the milk from the cuticle or throat discharges of persons afflicted with those diseases who were employed in the dairy while ill or convalescent. Mr. Earnest Hart has collected and tabulated fifty epidemics of enteric fever, fifteen of scarlet fever and seven of diphtheria—which have been traced to milk poisoning."

The volume concludes with a paper by Dr. F. R. Campbell, who has done most valuable work in connection with his position as Sanitary Inspector, and whose studies of local health matters have won many encomiums. It is entitled The Relation of Locality to Disease in Buffalo. He commences his paper thus:

> I have discovered that the death-rate varies from twelve and twenty-five hundreths per 1,000 in the Tenth Ward to twenty-four per 1,000 in the Fifth; that

certain zymotic diseases are most fatal in some one or two wards (diphtheria in the First Ward, for example), and that certain relations existing between the sanitary conditions of a locality and the prevalence of particular diseases are indicated. It is also observed that the death-rate of the city diminishes as its sanitary condition is improved. The mortality from zymotic diseases has been regularly reduced during the past six years.

Further on, when speaking of the soil upon which the city is built, he says:

I believe that diphtheria and croup are always most prevalent on damp, cold soils, especially if the soil is contaminated by decomposing organic matter. Diphtheria is four times more fatal in wet seasons than in dry, and is usually most fatal in districts poorly drained.

Soils possess the power of destroying the impurities which are cast upon them. Falck made the discovery that sewer water ran off pure after being filtered through very thin beds of sand. Soyaka at first supposed that the soil simply retained the impurities, but, on further investigation, he learned that the impurities were really destroyed if the soil contained a sufficient quantity of air. Even strychnine is as completely destroyed by the soil as if it were cast into the fire. Wolfhügel has examined the soil in various parts of Hamburg, and has found that even under badly-constructed sewers the soil was purer than that near the surface under the pavement. Emmerich has shown that samples of pond water, which would produce septicæmia in rabbits when injected subcutaneously, became harmless when shaken up with a little sand. Every foul soil which we cease to pollute will purify itself.

Soils vary in their power of self-purification, undrained clay soils having least ability to remove impurities. For this reason, sewerage becomes a necessity in all thickly-inhabited districts. The soil of a large portion of the Fifth and Sixth wards is already badly contaminated. That of the Thirteenth Ward, which has not been long settled, is still in fair condition, and, in spite of its bad natural qualities, the death-rate is very low. When a soil is saturated with fæcal and other impurities, all the exanthemata will become more fatal. If the season is dry, the air becomes tainted and diarrhœal diseases become epidemic.

His paper is made more complete by a mass of sanitary and mortality statistics which those will most appreciate who know by experience the time and patience required for their preparation.

Altogether the volume is a very valuable one, and reflects credit upon all concerned in its production; especially so upon Dr. Briggs, to whom is largely due the present efficiency and capability of the Board.

A COMPANY proposes to irrigate 1,500,000 acres of land in New Mexico.

THE LOMB PRIZE ESSAYS, PUBLISHED BY THE AMERICAN PUBLIC HEALTH ASSOCIATION.

By the generosity of Mr. Henry Lomb, of Rochester, prizes were offered for the best essays to be submitted in competition to the American Public Health Association. The subjects and awards were as follows:

I. HEALTHY HOMES AND FOODS FOR THE WORKING CLASSES. By Victor C. Vaughan, M. D., Ph.D., University of Michigan. Prize......	$200
II. THE SANITARY CONDITIONS AND NECESSITIES OF SCHOOL HOUSES AND SCHOOL LIFE. By D. F. Lincoln, M. D., Boston, Mass. Prize,	$200
III. DISINFECTION AND INDIVIDUAL PROPHYLAXIS AGAINST INFECTIOUS DISEASES. By George M. Sternberg, M. D., U. S. A. Prize......	$500
IV. THE PREVENTABLE CAUSES OF DISEASE, INJURY AND DEATHS IN AMERICAN MANUFACTORIES AND WORKSHOPS, AND THE BEST MEANS AND APPLIANCES FOR PREVENTING AND AVOIDING THEM. By George H. Ireland, Springfield, Mass. Prize.................	$500

That these essays may be placed in the hands of every family in the country is the earnest desire of the Association, as well as the heartfelt wish of the public-spirited and philanthropic citizen whose unpretentious generosity and unselfish devotion to the interests of humanity have given us these essays, but the financial inability of the Association renders it impossible to distribute them gratuitously; therefore a price covering the cost has been placed upon these publications. The four essays above mentioned are sold, in paper covers, at the exeedingly low price of twenty-five cents. In many ways it would be a great kindness if numbers of them could be placed in reading rooms, cafés, and in resorts where the public congregate. They may be obtained from the secretary, Dr. Irving A. Watson, Concord, N. H.

BERNHARD VON LANGENBECK, the Nestor of contemporary German surgeons died on September 30th, of an apoplectic stroke. He came of a family of illustrious surgeons. Along with two uncles of the same name, Rudolph and Konrad, and a cousin Maximilian, he has made the family name more famous in the annals of medical science than any other we can now recall.

Born in 1810, and studying especially with his uncle Konrad, he first prepared himself as a *privat docent* in physiology, in Göttingen. Becoming professor in the same university, but showing special aptitude in surgery, he was called to Kiel as professor of surgery at the early age of thirty-two. Here he remained six years, when he was called to Berlin to fill the chair made vacant by the death of the renowned Diffenbach. Here he remained the balance of his life, until his retirement from active work in 1882, since which time he lived quietly, most of the time in Wiesbaden.

Probably no one man has ever wielded such an extraordinary influence in surgical matters as Langenbeck; not merely by his individual influence, but indirectly by the labors of his pupils, among the most celebrated of whom are Volkmann and Bilroth. He was the father of the so-called "modern school" of surgery. Alike genial, enthusiastic, active and untiring, the world owes more to him and to the men whom he moulded than it can ever realize. Surgeon to the Kaiser, and enjoying his perfect confidence, in the campaigns of 1864, 1866 and 1870–71, he did for Prussian armies what no other man could have done, and was, in effect, what Ambroise Paré was to the French soldiers of his day, who refused to fight unless he was with them. Especially in the fields of military surgery and joint-resections he revolutionized former practices. Founding in 1865 the Archives of Clinical Surgery, better known as Langenbeck's Archives, he began a special journal which has been of inestimable use and influence.

The esteem in which he was held by his own compeers is shown by the fact that since its organization in 1872 he has been president of the German Congress of Surgeons.

For him his home government erected a few years ago the magnificent University Surgical Clinic, which is to-day one of the ornaments of Berlin. The recipient of honors and dignities of all kinds from numerous sources, he ever presented that forbearance for the opinions of others, and that kindliness of heart which made him remarkable among the foremost men of his time.

His loss is to the German profession almost a calamity, while it will be felt in all civilized lands. How many teachers are there in this country to-day, who would at the age of seventy rise at five every morning and be ready to instruct their private classes at six, as was Langenbeck's habit? The wise or ambitious of all professions may well gather a lesson from the life-habits and career of this distinguished and lamented surgeon.

In many respects like his even more widely known colleague was the late PROF. MOSES GUNN, of Chicago, who died early in November.

A graduate of the old college at Geneva, which college, by the way, was moved to Buffalo and made the Buffalo Medical College, a friend and class-mate of the late Dr. Rochester, he determined to hew his own path in the great West, and in 1846 settled in Ann Arbor. He took with him two trunks, one of which contained his scanty personal effects; the other held the cadaver of a colored man, which he intended to dissect in the presence of his new professional associates. He soon gathered about him a class, and this became the nucleus of the medical school which was attached to the University of Michigan.

In Ann Arbor as in Detroit Dr. Gunn established a reputation which brought him an extensive practice. When Dr. Brainard died of cholera, after the war, during the terrible epidemic which visited Chicago, Dr. Gunn was invited to occupy his chair in Rush Medical College, which he since filled to the eminent satisfaction and pride of all concerned.

A man of jovial nature, earnest and most painstaking in his work, honorable to the extreme degree, an abominator of quackery in any form, a clear and admirable teacher, an intrepid operator—he endeared himself alike to the public and to the students whose idol he was. It will be difficult to find his successor either in the esteem of the Western profession or his capability for imparting instruction. He had been honored with the highest evidences of respect by his brother surgeons, having been recently President of the American Surgical Association.

Correspondence.

LETTER FROM VIENNA.

VIENNA, October 23, 1887.

My Dear Doctor—The winter semister of the University began on the sixth inst., and work is now progressing in earnest. This year finds over one hundred Americans here, there being representatives of almost every state in the Union. The courses of the celebrities, such as Billroth, Albert, Nothnagal and Bamberger, are crowded to overflowing, standing-room even being almost unattainable by those unfortunate enough to be late. One cannot help wondering why men, who attract so many students, should not have more commodious rooms in which to hold their clinics. As it is, the hygienic condition of the different places beggars description, and it requires no little amount of scientific ardor to sit through two hours in such foul and ill-smelling air. Many of the courses given by the extraordinary professors and privat-docents are admirable, and afford the student every opportunity for becoming conversant with the subject taught. Prominent among these is Prof. Weinlechner's upon special surgical pathology and therapeutics with clinic. There is an immense amount of clinical material, and one sees there operations of all magnitudes from the opening of simple abscesses to laparotomies. Last week a very large ovarian tumor, a suppurating kidney, and a uterus were removed from different patients, and operations for hernia, amputations, resections and the like are of daily occurrence. The number of students present is about ten, and each case is diagnosed by some member of the class who further suggests the treatment. The professor then gives his own opinion, always clearly, and often at considerable length. In addition each student is allowed to perform minor operations. One is immediately struck with the utter disregard for tissue, notably the peritoneum, which Prof. Weinlechner, in common with the majority of German surgeons, shows. For instance, in the ovariotomy above alluded to, the incision extended from one and one-half inches below the ensiform cartilage to the pubis, and as yet (eight days since) the patient has had no rise of temperature, and seems to be progressing favorably. Indeed I have not yet seen a death, and the operations have been many; a result all the more wonderful from the fact that the antisepsis is far from ideal. The on-looker often sees a towel doing service in ways quite at variance with the laws of antiseptic surgery. Carbolic acid, in solutions of varying strength, is the agent used in this clinic. Sponges are replaced by clean pieces of cloth in all abdominal operations.

Prevat-Docent Ehrmann gives an excellent course in venereal diseases. The class is limited to six, and each member diagnoses the case assigned him and then operates when this is necessary.

The number of patients in the wards is very large, and one can study here every manifestation of this class of diseases. Such a course as the above is private, not appearing in the University announcement. Obviously it is more expensive than regular clinics, but the advantages more than compensate for the difference in price.

Another deservedly popular course is that given by Prof. Ultzmann upon diseases of the genito-urinary organs. Coupled with a kindly face and musical voice, is a genial disposition which endears him to all his students. He is an admirable teacher, never leaving one in doubt as to his meaning. He reaches his diagnosis usually by exclusion, and it is hardly necessary to say, his conclusions are almost invariably confirmed. He conducts his examination of cases in a most thorough and systematic manner. His first step is to analyze the urine, which he always does personally, and so rapidly and easily as to astonish one. He then discusses the result, and should microscopical examination be necessary this is made during the day and reported at the beginning of his lecture on the following morning and the specimens shown under the microscope. He next examines the bladder and prostate per rectum, making this an almost invariable procedure in every case. He finally examines the bladder and urethra. His manipulation of the sound and catheter is rapid and graceful; and so minute and clear are his instructions in regard to their use that one could hardly fail to explore the parts intelligibly after hearing him. He is a firm advocate of irrigation of the bladder in all cases in which it is indicated. He uses exclusively the ordinary piston syringe, believing that it enjoys the advantage of cleaning the bladder more thoroughly than do the other forms. After emptying the bladder of urine he withdraws the catheter until the head lies in the neck of the bladder; using the internal sphincter as a valve against the eye of the instrument. The muscle thus affords no impediment to the flowing *in* of the solution, but prevents its flowing *out.* After retaining this for a longer or shorter time the patient voids the same, at the same time getting the benfit of its action upon the urethral mucous membrane.

Realizing that space in your valuable journal is always at a premium I shall defer further mention of University life until a future date. Very sincerely, JOHN PARMENTER.

BUFFALO, November 17, 1887.

EDITOR MEDICAL PRESS:

It was the expressed wish at the last meeting of the Medical Library Association that the report of its committee, which I send you, should be published in the Buffalo medical journals prior to the annual meeting December 2. Owing to the fact that the journals do not, as a rule, appear on the first day of the month, it is hoped that the meeting will be adjourned to Friday, December 9. The place of meeting will be in the library room at the Buffalo Medical College, and the hour of meeting at 4 P. M. The profession are invited to be present. Those only who have paid their dues for this year can vote at the meeting. The dues are three dollars, and can be paid any time to Dr. Hinkel, acting treasurer. I suppose arrangements will be made by which payment can be made at the meeting. In case an adjournment is made some public notice will be given.

Truly yours,

WILLIAM D. GRANGER.

Society Proceedings.

BUFFALO MEDICAL LIBRARY ASSOCIATION.

Report of a Committee upon Proposals to Merge the Library with the Buffalo Medical College Library, or with the Buffalo (Young Men's) Library.

At a meeting of the directors of the Buffalo Medical Library Association, held October 28, 1887, the undersigned were appointed a committee to consider propositions made by parties willing, under certain conditions, to assume the care of our library. We were also directed to report at the annual meeting, held on the first Friday in December, next.

We, therefore, make the following report:

In order to fully understand the present condition of the library, we would briefly review the story of its history and its struggles. The library is now ending its fifth year. It has kept its obligation with the profession, but finds itself without professional support. Every demand worthy of consideration to make the library more popular has been adopted. We still keep upon our tables a fresh supply of the best medical periodicals of this country and Europe; we have made the periodicals available for home use almost as soon as received; we have daily kept the library open for consultation, and provided for some one to be present to attend to visitors, and we have reduced the annual dues to $3.00 a year; we have the foundation for a good library; we have our five years of subscriptions of periodicals, mostly bound; we have over 150 bound books; we have valuable gifts of pamphlets, files of journals, etc., ready to be bound. As an example, we may mention an almost complete file of the *American Journal of Medical Science.* In a word, the library is just getting into a position to be useful and command the respect of the profession, its support and its gifts. The location of the library has, from the first, been the most important matter for the directors to decide upon. It was debated at length, in the meeting for organization, by the profession at large, and, undecided by them at that time, has been the subject of their discussion at each annual meeting. The directors have tried to secure a central location, to have the rooms open daily and some one present to attend to visitors. In these efforts they have been successful.

At first the library was in a private house, but the rent—$200.00 a year—made it necessary to remove to some less expensive place. After much deliberation it was unanimously decided, in 1885, to accept the offer of the Buffalo Medical College, and the library was removed there, where it still remains. We pay them $52.00 a year. In return they keep the library room open six hours a day, and have some one present to attend to visitors. They also attend to all details for the protection of our property. The other expenses of the library, including $80.00 for journals and something for incidentals, make the total expenditures nearly $150.00 a year.

This small sum cannot be raised by the profession, and the end of each year finds us in debt. Again and again the friends of the library have paid its debts, but the utter want of interest by the profession gives them little encouragement to continue this practice. It is strange that as the library becomes more valuable its support becomes less and less.

The following shows the amounts of annual dues received, from the organization of the library:

1883	$305.00
1884	255.00
1885	145.00
1886	113.00
1887	74.00
Total	$892.00
Individual subscriptions	170.00
Total	$1,062.00

Would that the profession still had the desire to support the library with $300.00 a year, and would continue to do so for five years. Then with its diminished expenses it would grow rich in all that it is desirable for a library to be, and instead of a shame be a source of pride to our profession and become too valuable to be neglected.

The library, however, ends the year with a greatly diminished income, a debt of over $100.00, and the yearly subscriptions of our journals expiring. It seems impossible to continue our present modest expenses, and your committee feel obliged to advise you to accept one of the two offers made us by those willing to care for our library and give it, without cost, shelf-room.

The first offer to consider is that of the Buffalo Medical College. They offer to take *in trust* our library, subject to our recall at any time. They agree to keep up our files of journals. The additions they pay for belong to the college. They will make the library a free consulting library for the whole profession. The right to a circulating use of the library to be obtained by paying a fee of not more than $3.00 a year.

We would suggest, if the above propositions be agreed to, that a full list of property turned over be made, signed by the representatives of library and college; the college to be responsible for the safe keeping of our property, without any expense on our part; that they yearly make a report to the Library Association at its annual meeting of the condition of our property; that we reserve the right to keep up any of our files, and that all books, pamphlets and periodicals added by us shall belong to our Library Association, and be cared for without cost and returned to us on demand; that a committee of three, representing the library, shall have access at any reasonable time to inspect the condition of our library, and that a committee of three be appointed to arrange for and make the necessary transfer.

The Buffalo Library Association is willing to receive our books, bound pamphlets and periodicals, and such other material as can be placed on shelves, and keep them apart from the general library as a district collection. Our periodicals, which they wish us to continue, will be placed in their general reading room. Members of their association are to have, under certain restrictions, the use of our property, and members of the Medical Library Association are also to enjoy the right use of our library, though not members of the Buffalo Library Association. We would suggest, if these propositions are accepted, to insist upon the same safeguards for the protection of our property, as we suggested in the case of the Medical College.

The committee do not advise which of the above propositions should be accepted. But we do advise that it is necessary to accept one of them, if the property we now own is to be cared for and our association saved from ruin.

William D. Granger.
John Hauenstein.
F. W. Bartlett.

MAN AND HIS SHOES.

How much a man is like his shoes!
For instance, both a sole may lose;
Both have been tanned; both are made tight
By cobblers; both get left and right.
Both need a mate to be complete;
And both are made to go on feet.
They both need healing; oft are sold,
And both in time will turn to mold.
With shoes the last is first; with men
The first shall be the last; and when
The shoes wear out they're mended new;
When men wear out they're men dead, too!
They both are trod upon, and both
Will tread on others, nothing loth.
Both have their ties, and both incline,
When polished, in the world to shine;
And both peg out. Now would you choose
To be a man or be his shoes. —*Boston Courier.*

Book Reviews.

HUMAN PHYSIOLOGY. By H. C. Chapman, M. D., etc. Pp. 930. Philadelphia: Lea Bros. & Co., 1887.

A new text-book on Physiology has just been published by Lea Brothers & Co., of Philadelphia. This time it is not a translation of some European work, but an American production from the pen of Dr. Henry C. Chapman, Prof. of Physiology in Jefferson Medical College, of Philadelphia. Although not as practical to the practitioner as, for instance, Prof. Landois' book, it is well adapted to the needs of students as well as physicians, as a work for study and reference; indeed for the latter more than for the former, because the vast amount of information condensed into the 930 pages of the book will never enter the minds of the students during college life, but it will undoubtedly stimulate them to further study after graduation. The arrangement of the different chapters is logical with the exception of one part; we fail, for instance, to see why respiration succeeds blood and circulation when digestion and absorption precedes it; it seems to us more rational to let the blood absorb solid and liquid as well as its gaseous food before circulating it through the body. But that is a matter of opinion. We do miss, however, a notice of the most recent experiments on the localization of brain functions carried on by Prof. Munk, of Berlin, which to a certain extent contradict those of Prof. Ferrier quoted in the book; likewise of the researches of Goltz, of Strassburg, who tries hard to contradict both, and of many other exceedingly interesting experiments, physiological as well as pathological, on the subject, recently published by German investigators, and which we hope to see incorporated with the next editions. The many papers devoted to physics demonstrate to the world that medical students, even in Philadelphia, are rather deficient in that important branch of knowledge which involves so many every-day questions.

The book is well illustrated, and the publisher's part of the work has been performed with care and taste, and physicians need not hesitate to recommend Prof. Chapman's Physiology as a text-book durtng college life as well as a book of reference to the practitioner.

THE PHYSICIANS' PERFECT CALL BOOK AND RECORD. By Dr. G. A. Stockwell. Detroit: Geo. S. Davis.

THE PHYSICIANS' VISITING LIST FOR 1888. Philadelphia: P. Blakiston, Son & Co.

THE MEDICAL NEWS VISITING LIST FOR 1888. Philadelphia: Lea Bros. & Co.

With the advent of the new year come the usual number of Visiting Lists, each presenting usually some improvement. That first mentioned above is, to us at least, new. Its particular advantage is that it can be used for any year, so the young physician with few patients could, indeed, use it for two years instead of one. Its posological tables are extensive, while there is added a table of rarer synonyms, such as we have never before seen in a similar work. To the Blakiston Visiting List have been added a list of the very new remedies, a diagram showing the eruption of the milk teeth, and some other matter of minor importance. The *Medical News* list has been also rearranged and improved. The new remedies which have been shown to be inefficacious have been omitted, and its tables condensed.

HANDBOOK OF GENERAL THERAPEUTICS. Edited by Prof. Von Ziemssen. New York: Wm. Wood & Co. 1887. Buffalo: J. H. Matteson.

VOL. VI. ELECTRO-THERAPEUTICS. By Prof. Wilhelm Erb. Pp. 732.

VOL. VII. THERAPEUTICS OF CIRCULATORY DERANGEMENTS. By Prof. M. J. OERTEL. Pp. 276.

This extensive work is at last completed, and the two concluding volumes lie before us.

VOL. VI., by Prof. Erb, is given up to electro-therapeutics. It opens, as most German works do, with a history of the subject. Then follow the usual chapters on the physics of galvanism and faradism. No attempt is made to conceal the fact that as yet no theory of action of the electric current on living tissues can be entertained. The greater part of the volume is given up to studying the effect of electrical reaction, and the special effect of the various currents in particular diseases. We are rather surprised to see that in a work of this size, by so talented an author, the subject of electrolysis is utterly ignored, since in this field, if anywhere, electrotherapeusis partakes of the nature of an exact science. Nor is any mention made of static electricity, which has been many times proved more efficacious than galvanism. We regard these omissions as radical defects which seriously mar the value of the work. The work in other respects bears evidence of both extreme German thoroughness and German ignorance of what Americans have done.

VOL. VII., by Prof. Oertel, includes the therapeutics of such circulatory derangements as weakness of heart muscle; cardiac asthenia, insufficient compensation, fatty heart, obesity, alterations in pulmonary circulation; in other words, as the translator puts it, the main subject of the work is venous stasis and its unpleasant consequences, and how to correct them. The author's physiological experiment on excretion of water from the skin and lungs are fully detailed. He makes here the interesting observation that patients with general dropsy, who survive an attack of cholera, recover also from their liver or kidney lesion, since with the disappearance of the watery transudations and retrogression of venous stasis the balance between the arterial and venous circulations is established. As one would expect, the experiments of the author into the value of foods and the dietetic treatment of obesity enjoy full treatment. Space fails in which to consider much that we would gladly notice. We can only say that Prof. Oertel has distinguished himself more than ever as an experimental clinician, and has contributed in this probably the most valuable volume of the series. The publishers have well done their work, and have presented a most attractive set of books which will grace the library of anyone who possesses them as well as materially enrich it.

A MANUAL OF PHYSICAL DIAGNOSIS OF THORACIC DISEASES. By E. Darwin Hudson, Jr., A. M., M. D. Pp. 150. New York: Wm. Wood & Co., 1887. Buffalo: J. H. Matteson.

In 1885 the talented author of this work published for private distribution his "Essentials of Physical Diagnosis of Thoracic Diseases," which gave such particular satisfaction, and proved so useful that he still further elaborated it and prepared it for public use. Unfortunately he died a few days after the manuscript had been given to the printer, and the work of correcting proof and writing a preface fell upon his friend Dr. Laurence Johnson, by whom it has been admirably done.

His discussion of physical methods is admirable, and his allusion to the so-called myoidema or peculiar momentary starting and elevation of the skin as a valuable diagnostic and prognostic sign in phthisis is worthy of special note. A common error to which he calls attention is the mistaking of the muscular sussurus or the rustle caused by the waves of fibrillary contraction for a healthy vesicular murmur. After a careful description of all the physics of auscultation and percussion he gives a careful synopsis of all the physical signs of the intra-thoracic diseases, including those of the heart. Illustrations are throughout freely used to the great elucidation of the subject. Every statement seems to have been judiciously weighed, and we regard the book as a whole as the best manual of the kind that has yet appeared.

A Reference Handbook of the Medical Sciences. Edited by Albert H. Buck, M. D. Vol. V., Mil-Pot. New York: Wm. Wood & Co. 1887. Buffalo: J. H. Matteson.

With each new volume of the Handbook our admiration for the work as a whole increases. The fifth volume is fully equal to its predecessors in size and number of its illustrations, and like them could not be improved on in subject-matter. With the article, for instance, on "Nomenclature," by Dr. Baldwin, we have been particularly pleased, since to this one can turn and in an instant learn what are Heberden's Disease or Keen's Sign or Scarenzio's Treatment, etc. Such an article is often worth the price of the volume. When such men as Bolles, Carmalt, Coe, Councilman, Fowler, Gibney, Hamilton, Hunter, Porcher, Ransohoff, Senn, Sternberg, Shattuck, Shepherd, Starr, Thompson and Witthaus write for a work, the impress of their names stamps the book as one which the rest of the medical world need to buy and read. A very valuable article also is that by Mr. Abbott, the author of Abbott's Law Dictionary, entitled, "Physician, Relation of, to the Law," in which just those points are mentioned which every practitioner ought to be fully familiar with. The article on "Plastic Surgery" is much better than the corresponding chapter in the International Encyclopædia. And so all through the work. While it might be possible for one critically disposed to detect here and there an inaccuracy, it still remains the most valuable work of its kind ever attempted in our language.

OPERATIVE SURGERY ON THE CADAVER. By Jasper Jewett Garmany, M. D., F. R. V. S. Pp. 150. New York: D. Appleton & Co. 1887. Buffalo: Otto Ulbrich.

This little manual, like Gurlt's "Leitfaden," is confined in scope to those operations which one ordinarily practices or expects to learn from work on the cadaver alone. In its necessarily limited scope it is above criticism, save that a few of the modern operations, which one must learn, if ever, on the dead body, are not described. The arrangement is orderly, the descriptions concise, the context lucid, and the operation methods well selected. Indeed, there is nothing superfluous in the book, and the busy practitioner, who must do more or less surgery, would find it a very useful manual for frequent reference.

BOOKS RECEIVED.

From E. B. Treat, New York:
  Handbook of Treatment: AITKEN.

Vol. II., Transactions of the Association of American Physicians.

From Wm. Wood & Co., New York, through J. H. Matteson, Buffalo:
  Ziemssen's Handbook of Treatment, Vols. VI. and VII.

From Lea Bros. & Co., through Peter Paul & Bro.:
  Anatomy, Descriptive and Surgical: HENRY GRAY.
  Text-book of Therapeutics and Materia Medica: ROBERT T. EDES.
  Medical News Visiting List for 1888.

From D. Appleton & Co., New York, through Otto Ulbrich, Buffalo:
  Materia Medica and Therapeutics, 6th Ed.: ROBERTS BARTHOLOW.

NOTICE.

IN ORDER to make THE MEDICAL PRESS of greater value to our readers, we offer to print, for not more than two insertions, three-line notices of wants, exchanges, practices for sale, etc., *free of charge*. Such notices should be received by the fifteenth of each month.

WANTS, EXCHANGES, &c.

Wanted.—A copy of Barwell on Diseases of the Joints. Address the Editor.

To Exchange.—Part II., medical volume of The Medical and Surgical History of the War of the Rebellion, for either Part I. or III. medical volume, or Part II. surgical volume of the same work. Clarence King, M. D., Machias, N. Y.

To Exchange.—For other microscopic preparations. Mountings of nearly all the pathogenic bacteria. Also, cultivations of same in gelatine or agar-agar, for sale or exchange. Address the Editor.

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